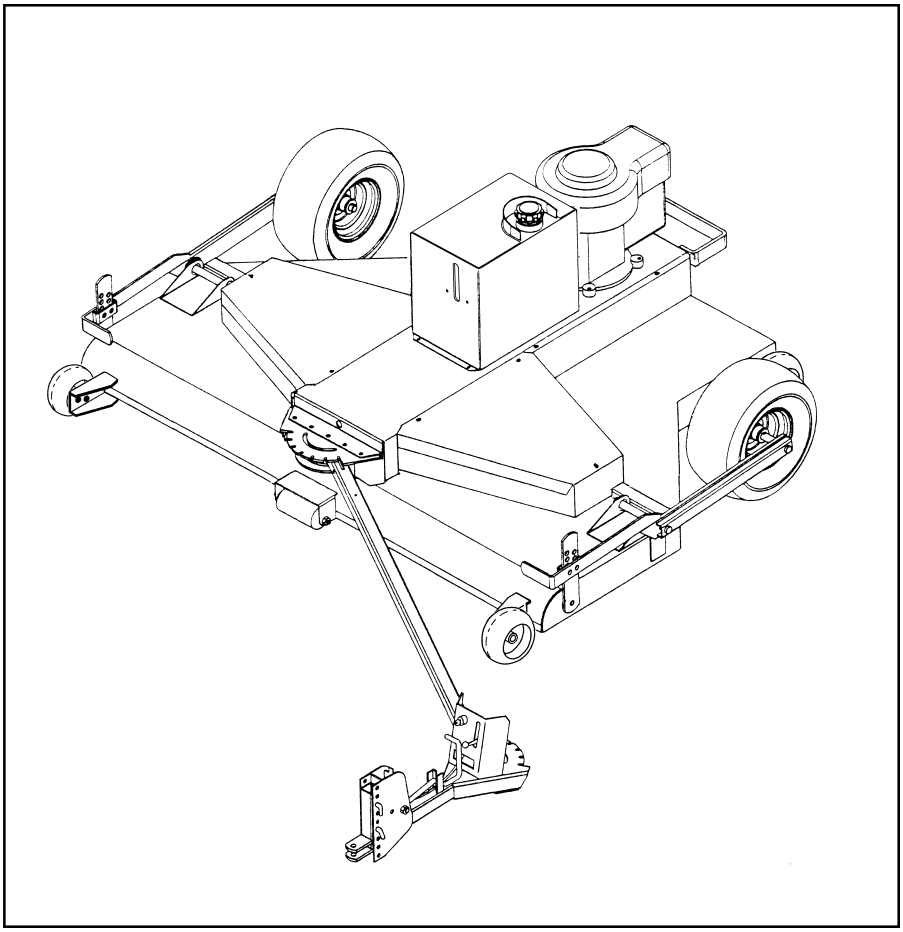
Agri-Fab®

OWNERS MANUAL

Model No. 45-0305

CAUTION:
Read Rules for Safe Operation and Instructions Carefully



63" FINISH CUT TRAILMOWER

NOTE: Your mower deck will require a 12 volt battery to operate. This battery is NOT included with the deck but must be purchased separately. Any 12 volt tractor battery with about 230 cold cranking amps. will operate the machine.

- Assembly
- Operation
- Maintenance
- Parts

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PRINTED IN U.S.A. FORM NO. 48099P (REV. 7/03)

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SAFETY RULES

Safe Operation Practices for Tow Behind Mowers

IMPORTANT: THIS CUTTING MACHINE IS CAPABLE OF AMPUTATING HANDS AND FEET AND THROWING OBJECTS. FAILURE TO OBSERVE THE FOLLOWING SAFETY INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.

I. GENERAL OPERATION

- Read, understand, and follow all instructions in the manual and on the machine before starting.
- Read this operator's manual carefully. Become familiar with the controls and know how to operate your mower properly.
- Only allow responsible adults, who are familiar with the instructions, to operate the machine.
- Clear the area of objects such as rocks, toys, wire, etc., which could be picked up and thrown by the blade.
- Be sure the area is clear of other people before mowing. Stop machine if anyone enters the area.
- Never carry passengers.
- Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Be aware of the mower discharge direction and do not point it at anyone. Do not operate the mower without the guard in place.
- Slow down before turning.
- Never leave a running machine unattended. Always turn off blades, and stop engine.
- Turn off blades when not mowing.
- Mow only in daylight or good artificial light.
- Do not operate the machine while under the influence of alcohol or drugs.
- Watch for traffic when operating near or crossing roadways.
- Use extra care when loading or unloading the machine into a trailer or truck.
- Do not attempt to operate your tractor or mower when not in drivers seat.
- Disengage power to mower, stop engine when transporting or not in use.
- Exercise special care when mowing around fixed objects in order to prevent the blades from striking them. Never deliberately run tractor or mower onto or over any foreign object.
- Use mower only as the manufacturer intended and as described in this manual.
- Do not operate mower if it has been dropped or damaged in any manner. Always have damage repaired before using your mower.
- Always wear safety glasses or eye shields when starting and while using your mower.
- Dress properly. Do not operate mower when barefoot or wearing open sandals. Wear only solid shoes with good traction when mowing.
- Always make cutting height adjustments before starting your mower. Never attempt to do this while the engine is running.
- Keep your eyes and mind on your mower and the area being cut. Do not let other interests distract you.
- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- Before cleaning, inspecting, or repairing your mower, stop the engine and make absolutely sure the blade and all moving parts have stopped. Then disconnect the spark plug wire and keep it away from the spark plug to prevent accidental starting..
- Do not operate your mower if it vibrates abnormally. Excessive vibration is an indication of damage; stop the engine, safely check for the cause of vibration and repair as required.
- Never operate your mower without proper guards, plates, or other safety devices in place.

II. SLOPE OPERATION

Slopes are a major factor related to loss-of-control and tipover accidents, which can result in severe injury or death. All slopes require extra caution. If you feel uneasy on it, do not mow it.

DO:

- Mow up and down slopes, not across.
- Remove obstacles such as rocks, tree limbs, etc.
- Watch for holes, ruts, or bumps. Uneven terrain could overturn the machine. Tall grass can hide obstacles.
- Use slow speed. Choose a low gear so that you will not have to stop or shift while on the slope.
- Follow the manufacturer's recommendations for wheel weights or counterweights to improve stability.
- Keep all movement on the slopes slow and gradual. Do not make sudden changes in speed or direction.
- Avoid starting or stopping on a slope. If tires lose traction, disengage the blades and proceed slowly straight down the slope.

DO NOT:

- Do not turn on slopes unless necessary, and then, turn slowly and gradually downhill, if possible.
- Do not mow near drop-offs, ditches, or embankments. The mower could suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- Do not mow on wet grass. Reduced traction could cause sliding.

III. CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. Never assume that children will remain where you last saw them.

- Keep children out of the mowing area and under the watchful care of another responsible adult.
- Be alert and turn machine off if children enter the area.
- Before and when backing, look behind and down for small children.
- Never carry children. They may fall off and be seriously injured or interfere with safe machine operation.
- Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

IV. SERVICE

- Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.
  - -- Use only an approved container.
  - -- Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling. Do not smoke.
  - -- Never refuel the machine indoors.
  - -- Never store the machine or fuel container inside where there is an open flame, such as a water heater.
- Never run a machine inside a closed area.
- Keep nuts and bolts, especially blade attachment nuts, tight and keep equipment in good condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves, or other debris build-up. Clean oil or fuel spillage. Allow machine to cool before storing.
- Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
- Never make adjustments or repairs with the engine running.
- Mower blades are sharp and can cut. Wrap the blade(s) or wear gloves, and use extra caution when servicing them.
- Check brake operation frequently. Adjust and service as required.

Look for this symbol to point out important safety precautions. It means CAUTION!!! BECOME ALERT!!! YOUR SAFETY IS INVOLVED.

CAUTION: Always disconnect spark plug wire and place wire where it cannot contact spark plug in order to prevent accidental starting when setting up, transporting, adjusting or making repairs.

SAFETY AND OPERATIONAL DECALS

Replace decal immediately if damaged. Order by part number. See back cover.

HOW TO USE YOUR MOWER

STOPPING

- Move mower blade clutch lever to "DISENGAGED" position.
- Move throttle control to "SLOW" position.
- Turn ignition key to "OFF" position.

STARTING

- Move mower blade clutch lever to "DISENGAGED" position.
- Move throttle control to the choke position for cold engine starts.
- Turn ignition key clockwise to "START" position and release key as soon as engine starts.
- When engine starts, slowly move throttle control to "FAST" position.
- Allow engine to warm up.

USE

- Sit on tractor seat.
- Move mower blade clutch lever to "ENGAGED" position.
- Operate tractor at medium ground speed. (3-4 MPH)

TRANSPORTING

- Shut off engine.
- Place mower deck in the highest position directly behind tractor.

CAUTION

- READ AND FOLLOW DIRECTIONS IN OWNERS MANUAL
- KNOW HOW TO OPERATE BOTH THE VEHICLE AND THE MOWER ATTACHMENT
- NEVER ALLOW CHILDREN TO USE THE EQUIPMENT
- DO NOT LEAVE MOWER RUNNING WITH UNIT UNATTENDED
- KEEP ALL SAFETY FEATURES IN PLACE AND OPERATING
- AVOID CONTACT WITH MOVING PART. KEEP HANDS AND FEET AWAY FROM BLADES
- STOP ENGINE BEFORE FUELING,ADJUSTING OR INSPECTING. DO NOT ADD FUEL TO AN ENGINE THAT IS RUNNING OR HOT

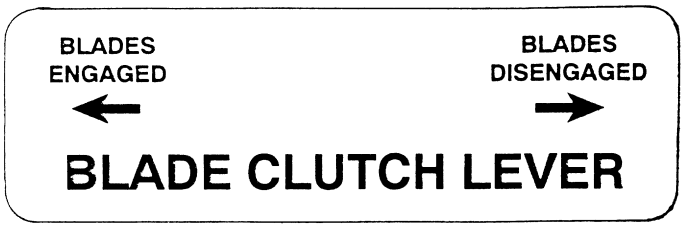
HA24431

HA12314 DANGER ROTATING BLADES DECAL

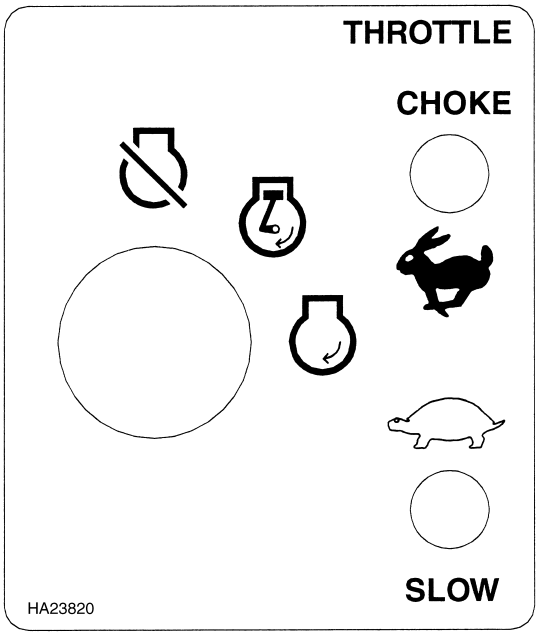
HA12315 DANGER DECAL

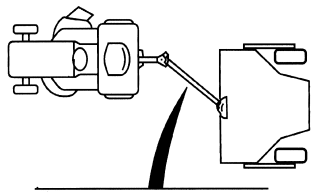
SAFETY AND OPERATIONAL DECALS

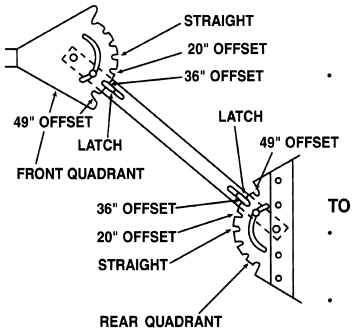
Replace decal immediately if damaged. Order by part number. See back cover.



HA23265 CLUTCH LEVER OPERATION DECAL







TOW HITCH OFFSET ADJUSTMENT

This tow behind mower has been designed to run offset from the center of the tow vehicle to give additional cutting width.

- The adjustable tow hitch of this mower can be set in four positions, straight, approximately 20" offset, 36" offset, and 49" offset to either side.
- We recommend when cutting with a tow vehicle all ready equipped with a 46", or 50" mower that the 49" offset be used. When cutting with a tow vehicle all ready equipped with a 36", 38", 40" or 42" mower, the 36" offset be used. When cutting heavier grass or when conditions warrant the mower can be adjusted to the 20" offset position.
- If tow vehicle is not equipped with a mid mount mower the hitch can be adjusted to a straight position, but we recommend using the offset position to eliminate grass being crushed down by the tow vehicle.

TO ADJUST THE OFFSET HITCH

- Pull back the pivot latch from the notch of the front quadrant. Adjust the hitch tube to the desired offset and release the pivot latch into the notch of the quadrant.
- Pull back the pivot latch from the notch of the rear quadrant. Adjust the hitch tube to the corresponding notch of the front quadrant and release the pivot latch into the notch.

IMPORTANT: The hitch tube must be assembled to the same offset notch in both the front and rear quadrants.

CUTTING HEIGHT ADJUSTMENTS

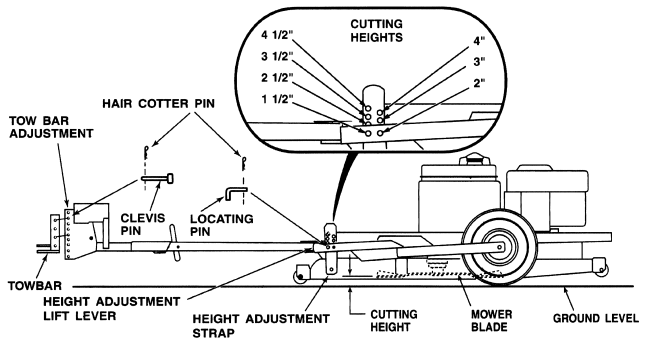
- To adjust the mower cutting height remove hair cotter pin from locating pin.
- Apply lift pressure to height adjustment lift lever.
- Remove the locating pin from the height adjustment strap.
- Move height adjustment strap up or down to align it with the desired hole in the height adjustment strap.
- Reassemble locating pin to the height of adjustment strap and secure with hair cotter pin.
- Make sure that both side height adjustment straps are adjusted to the same height.

FRONT TO BACK RAKE ADJUSTMENT

To obtain the best cutting results and reduce engine load, the mower housing should be adjusted so that the front is approximately 1/2 to 1" lower than the rear. To check front to back adjustment, measure from the bottm edge of the deck to the ground at both front and rear of the deck.

TO ADJUST MOWER FROM FRONT TO BACK

- Remove two hair cotter pins from two clevis pins in the tow bar adjustment.
- Remove two clevis pins from tow bar adjustment.
- Raise or lower the tow bar to obtain the proper front to back adjustment.
- Reassemble two clevis pins to tow bar adjustment and secure with two hair cotter pins.



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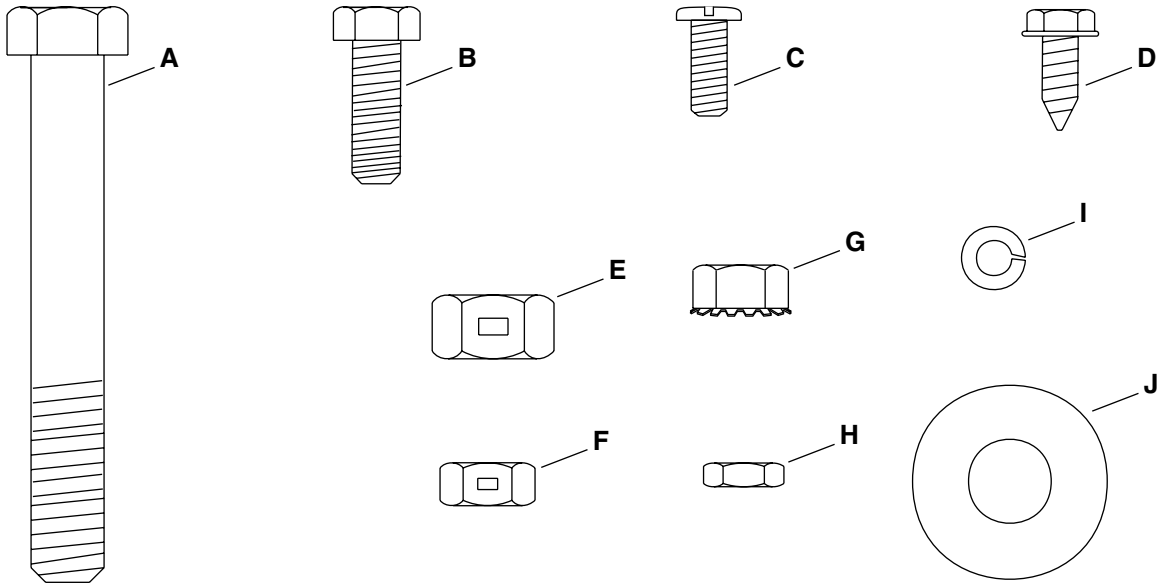
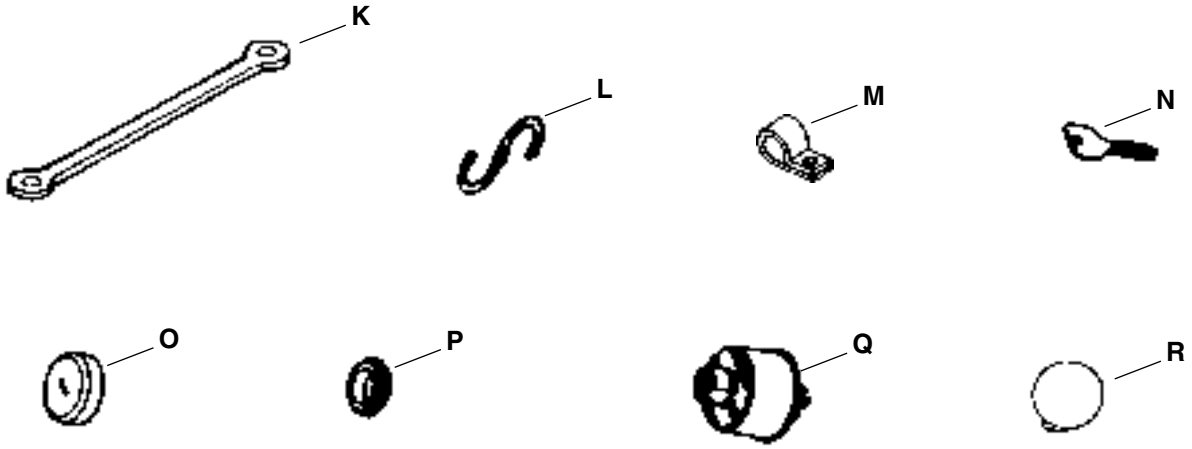
CONTENTS OF PARTS BAG

SHOWN FULL SIZE



NOT SHOWN FULL SIZE



KEY	QTY.	DESCRIPTION	KEY	QTY.	DESCRIPTION
A	2	Bolt, Hex 3/8" x 2-3/4"	J	2	Flat Washer, 3/8"
B	3	Bolt, Hex 1/4" x 3/4"	K	1	Battery Hold Down Strap
C	2	Screw, Pan Head #10-24 x 1/2"	L	2	"S" Hook
D	3	Screw, Self Tapping #10-16 x 1/2"	M	6	Cable Clip
E	2	Nut, Hex Lock 3/8"	N	1	Key
F	1	Nut, Hex Lock 1/4"	O	1	Switch Cover
G	2	Nut, Hex with Washer	P	1	Switch Nut
H	2	Nut, Hex #10-24	Q	1	Switch
I	2	Lock Washer, #10	R	1	Throttle Control Knob

ASSEMBLY

REMOVING UNIT FROM CRATE

- Remove top boards.
- Cut wire ties.
- Remove Hitch Assembly.
- Remove front of crate.
- Roll mower forward out of crate.

CAUTION

Before starting to assemble mower, remove spark plug wire from plug of mower engine.

OPERATOR ORIENTATION

When right and left are mentioned in this manual, it means when you are in the operating position (seated behind the steering wheel).

CONTENTS OF CRATE

- Mower Deck
- Tow Bar Hitch
- Owner's Manual
- Parts Bag (Found inside Battery Box.)
- Your Mower Deck will require a 12 volt battery to operate. This battery is NOT included with the deck but must be purchased separately. Any 12 volt tractor battery with about 230 cold cranking amps will operate the machine.

ENGINE OIL

Very Important:

Engine must be filled with oil before operation. See Oil & Fuel Recommendations in Engine Owner's Manual for correct filling instructions and oil fill capacity.

INSTALL TOW BAR HITCH TO REAR QUADRANT

- Slide tube of Tow Bar Hitch into rear quadrant and align holes. (See Fig. 1)
- Insert a 3/8 x 2 3/4 Hex Bolt through rear hole of quadrant and tube.
- Secure Bolt, hand tighten only with a 3/8 Lock Nut.
- Assemble 3/8 Flat Washer onto 3/8 x 2 3/4 Bolt.
- Insert the Bolt through quadrant slot, through Tow Bar Tube and slot in Lower Plate.
- Secure Bolt, hand tighten only with one 3/8 Flat Washer and 3/8 Lock Nut.
- Tighten Lock Nuts down tight on both Bolts.
- Back Nut off 1/4 turn to allow Tube to pivot freely.
- Tow Bar Tube must pivot freely when latch is pulled from notch in rear quadrant.

INSTALL WIRE HARNESS, THROTTLE CABLE AND CLUTCH CABLE TO TOW BAR

- Cut plastic tie then remove Wire Harness, Throttle Cable and Clutch Cable from bag and from around engine. (See Fig. 1)
- Lay Wire Harness along the right side of the Tow Bar Tube.
- Assemble three 1/2 inch Cable Clips onto wire Harness.
- Lay the Throttle Cable along the left side of the Tow Bar Tube.
- Assemble three 1/2 inch Cable Clips on to Throttle Cable.
- Lay the Clutch Cable along the left side of the Tow Bar Tube.
- Insert the Clutch Cable into the two 1/2 inch Cable Clips toward the hitch with the Throttle Cable.
- Place 1/2 inch Cable Clips of one side on top of 1/2 inch Cable Clips on other side.
- Align holes of Cable Clips with three holes in Tow Bar Tube and secure with three #10 Self-Tapping Screws.
- Keep all three cables on top of Tow Bar Tube and tuck Clutch Cable through slot at bottom of Control Panel.

INSTALL CLUTCH CABLE TO CLUTCH LEVER

- Remove outer 5/16 Nut from end of Clutch Cable Housing. (See Fig. 1)
- Turn inner 5/16 Nut to bottom of thread.
- Insert Cable and outer 5/16 Nut through slotted hole in Cable Guide of Hitch Assembly. The outer 5/16 Nut must be cocked sideways to insert through slotted hole of Cable Guide.
- Reinstall outer 5/16 Nut to the cable housing to secure Cable Harness to Cable Guide.
- Install Mounting Anchor of Clutch Cable to Clutch Lever using 1/4-20 x 3/4 Hex Bolt and 1/4-20 Lock Nut. Tighten 1/4-20 Lock Nut securely and then loosen approximately two turns to allow Mounting Anchor to pivot freely on bolt.

INSTALL THROTTLE CONTROL HANDLE TO THE CONTROL PANEL.

- Place Throttle Control Handle inside Control Panel with the handle through the slot on the left side.
- Secure the Throttle Control Handle with two #10 x 1/2 Pan Head Screws, two #10 Lock Washers and two #10 Nuts.
- Assemble Throttle Control Knob onto top of Handle and push down on it to secure

ASSEMBLY

INSTALL STARTER SWITCH TO THE CONTROL PANEL

- Install Connector of Wire Harness to Starter Switch.
- Insert Starter Switch into hole of Control Panel.
- Secure Starter Switch with Switch Nut (plastic) and Rubber Cover.

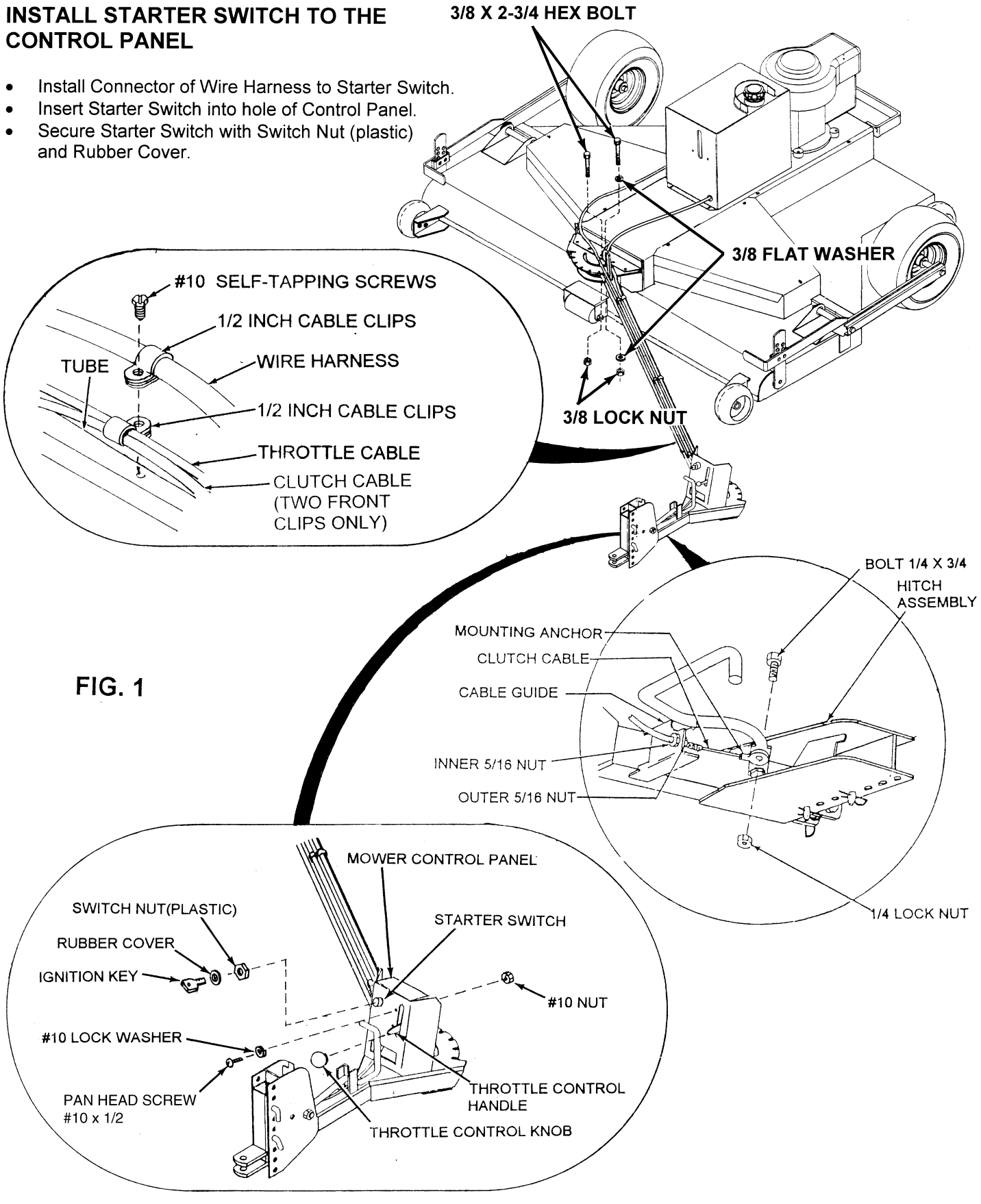


FIG. 1

ASSEMBLY

CHECKING CLUTCHING V-BELT TENSION

- Disconnect spark plug wire.
- Remove left side panel from Engine Mounting Plate.
- Place the Mower Blade Clutch Lever in the "ENGAGED" position.
- Check spring tension. (See Fig. 2)
- Tension is correct if there is a 5/8 to 7/8 inch gap between the spring clip and the trunnion of the spring rod.
- If gap is not 5/8 to 7/8 inch, an adjustment will be required.

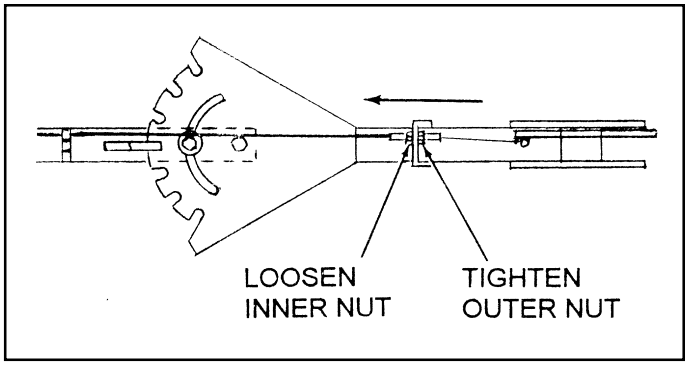


FIG. 2A

ADJUSTING CLUTCHING V-BELT TENSION

TO INCREASE CLUTCHING V-BELT TENSION:

- Place Mower Blade Clutch Lever in the "DISENGAGED" position.
- Loosen the Outer Nut of the Clutch Cable. (See Fig. 2A)
- Tighten the Inner Nut to increase spring tension.

NOTE: For every 1/8 inch of adjustment made to the Cable you will increase the gap between the Ring Clip and the Trunnion by 1/8 inch.

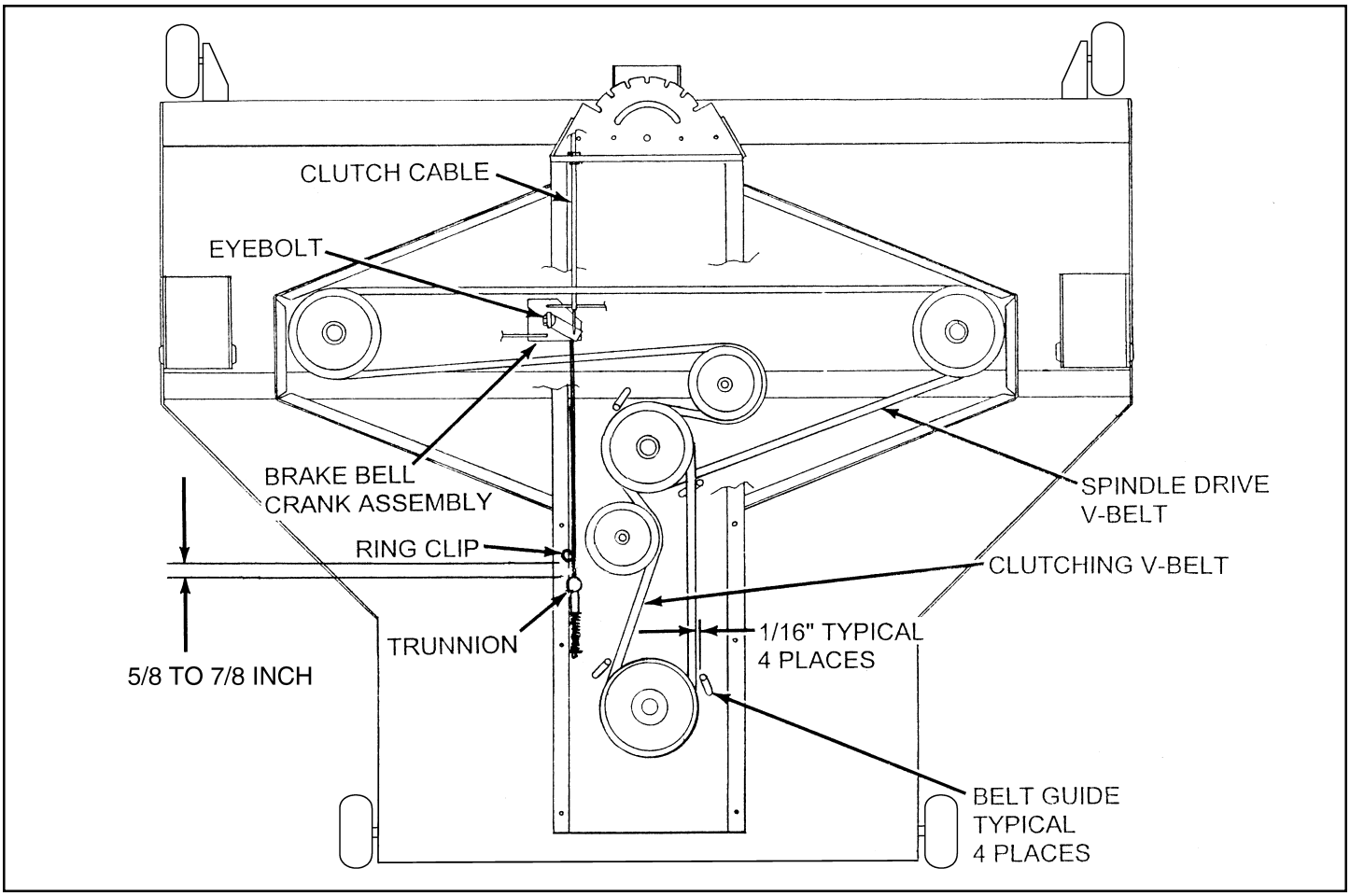


FIG. 2

ASSEMBLY

ASSEMBLE BATTERY TO THE MOWER

- Remove Battery Box Cover by removing four Self-Tapping Screws. (See Fig. 3)
- Remove paper backing from Battery Pad and install to Engine Mounting Plate centered between "S" hook slots.
- Assemble two "S" Hooks to the rubber Battery Hold Down Strap.
- Assemble "S" Hook of Battery Hold Down Strap into far side slot of Engine Mounting Plate
- Place Battery onto Battery Pad.
- Loop Battery Hold Down Strap over the top of the Battery and secure into slot and hole on the outside of the Battery.
- **Assemble red Battery Cable to the positive side of the Battery and secure with one 1/4 x 3/4 Hex Bolt** and one 1/4 Nut with Washer
- **Assemble Black Battery Cable to the negative side of the Battery and secure with one 1/4 x 3/4 Hex** Bolt and one 1/4 Nut with Washer
- **Reassemble Battery Box Cover and secure with four Self-Tapping Screws.**

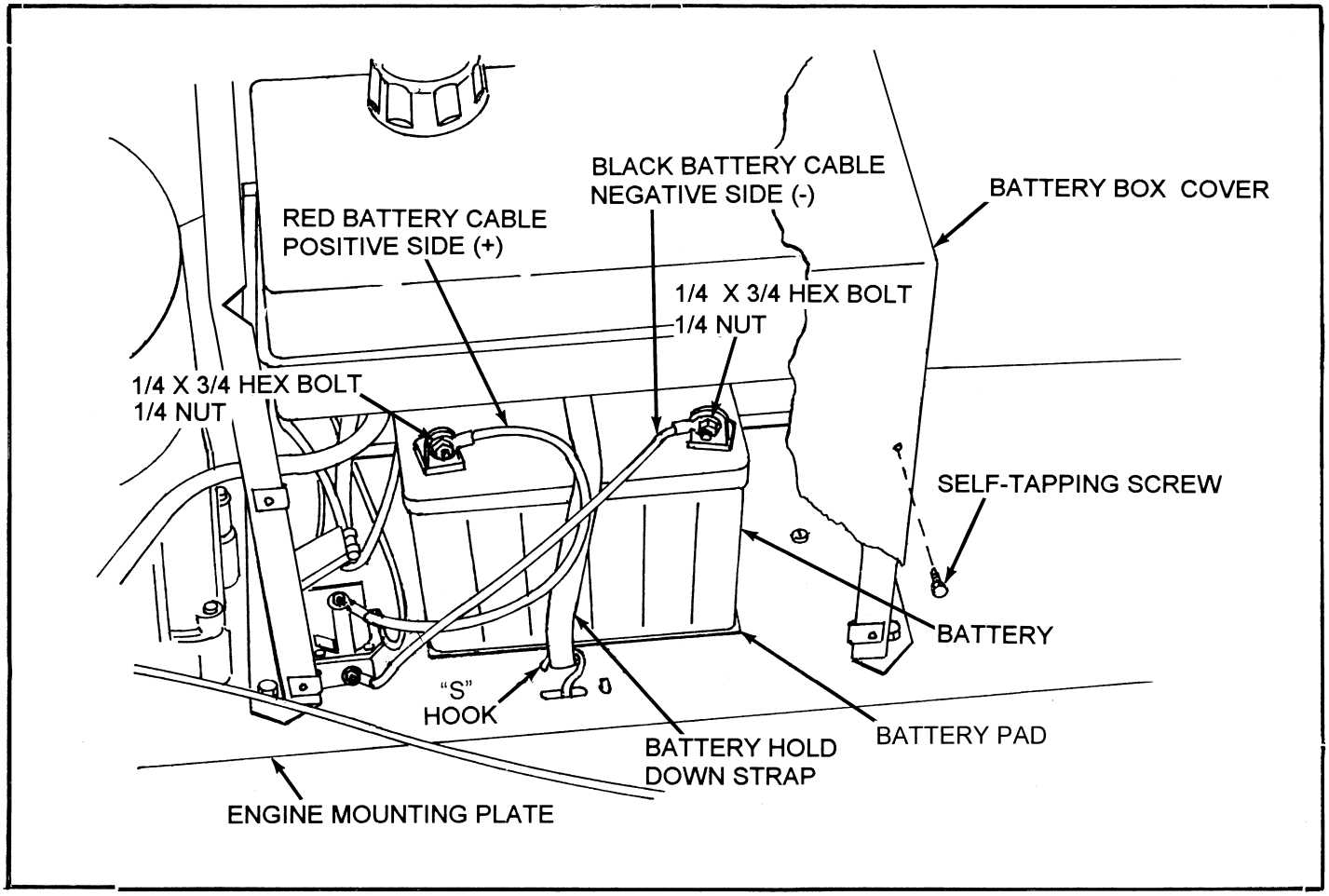


FIG. 3

OPERATION

KNOW YOUR MOWER

READ THIS OWNER'S MANUAL AND SAFETY RULES BEFORE OPERATING YOUR MOWER.

Compare the illustrations with your mower to familiarize yourself with the location of various controls and adjustments. Save the manual for future reference.

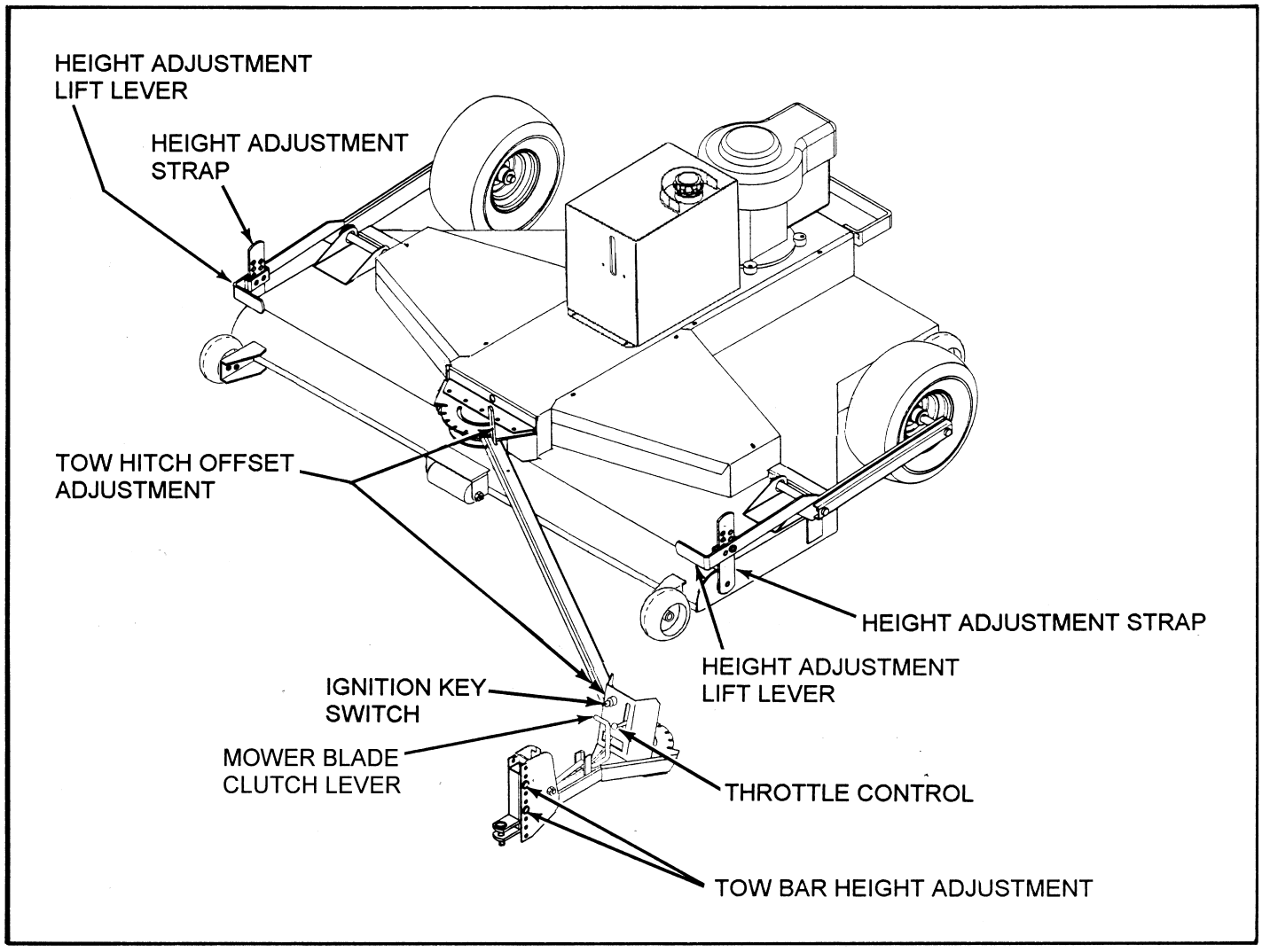


FIG. 4

MOWER BLADE CLUTCH LEVER – Starts and stops mower blade rotation.
THROTTLE CONTROL - Controls engine speed, engine shut-off and engine choke.
IGNITION KEY SWITCH - Used to start and stop engine.
HEIGHT ADJUSTMENT LIFT LEVER - Raise and lower mower to different cutting heights.
HEIGHT ADJUSTMENT STRAP - Controls cutting height.
TOW BAR HEIGHT ADJUSTMENT - To level mower front to rear.
TOW HITCH OFFSET ADJUSTMENT - To adjust mower deck offset from tractor center.

OPERATION

The operation of any mower can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields before starting your mower and while mowing. We recommend wide vision safety mask for over the spectacles or standard safety glasses.

CHILDREN

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. *Never* assume that children will remain where you last saw them.

HOW TO USE YOUR MOWER

STOPPING

MOWER BLADES-

- Move mower blade clutch switch to "DISENGAGED" position.

ENGINE-

- Move throttle control to "SLOW" position.

NOTE: Failure to move throttle control to "SLOW" position or allowing engine to idle before stopping may cause engine to "backfire".

- Turn ignition key to "OFF" position and remove key. Always remove key when leaving tractor to prevent unauthorized use.
- **Never use choke to stop engine.**

TO USE CHOKE CONTROL

Use choke control whenever you are starting a cold engine. Do not use to start a warm engine.

- To engage choke control, move throttle control to choke position.
- After engine has started move throttle control to full
- throttle position.

TO USE THROTTLE CONTROL

Always operate engine at full throttle.

- Operating engine at less than full throttle reduces the battery charging rate.
- Full throttle offers the best mower performance.

TRANSPORTING

- Shut off engine.
- Place mower deck in the highest position directly behind tractor.

ATTACHING MOWER TO TRACTOR

- Place mower behind tractor and back tractor up to it for attaching. (See Fig. 5)
- Slide tow bar of mower over tractor draw bar so that the hitch pin holes line up.
- Insert hitch pin until it extends through the bottom of the tow bar.
- Insert hair cotter pin through hitch pin.

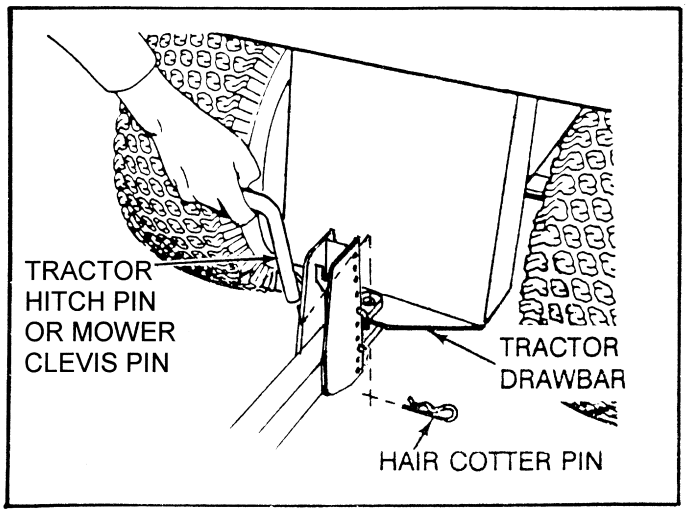


FIG. 5

OPERATION

ADD GASOLINE

- **Fill fuel tank. Use fresh, clean, regular unleaded gasoline. (Use of leaded gasoline will increase carbon and lead oxide deposits and reduce valve life.**

IMPORTANT: WHEN OPERATING IN TEMPERATURES BELOW 32°F(0°C), USE FRESH,, CLEAN WINTER GRADE GASOLINE TO HELP INSURE GOOD COLD WEATHER STARTING.

WARNING: Experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. See Storage Instructions for additional information. Never use engine or carburetor cleaner products in the fuel tank or permanent damage a may occur.

BEFORE STARTING ENGINE

- Fill engine with oil. (See engine manual for proper procedure and requirements.
- Add gasoline. Fill fuel tank using fresh clean unleaded gasoline. (See tractor manual for safe filling procedure and storage instructions)

CAUTION:
FILL TO BOTTOM OF FUEL TANK FILLER NECK. DO NOT OVERFILL. WIPE OFF ANY SPILLED OIL OR FUEL. DO NOT STORE, SPILL OR USE GASOLINE NEAR OPEN FLAME.

TO START ENGINE

When starting engine for the first time or if engine has run out of fuel, it will take extra cranking time to move fuel from the tank to the engine.

- Move mower blade clutch lever to "DISENGAGED" position.
- Move throttle control to the choke position for cold engine starts. For warm engine starts move throttle control to midway between "FAST" and "SLOW" positions.
- Turn ignition key clockwise to "START" position and release key as soon as engine starts. Do not run starter continuously for more than fifteen seconds per minute. If engine does not start after several attempts, move throttle control to "FAST" position, wait a few minutes and try again.
- When engine starts, slowly move throttle control to "FAST" position.
- Allow engine to warm up for a few minutes before engaging mower blade clutch lever.

NOTE: If at a high altitude (above 3000 feet) or in cold temperatures (below 32°F), the carburetor fuel mixture may need to be adjusted for best engine performance. See "TO ADJUST CARBURETOR" in your Engine Owner's Manual

CAUTION: CHECK AREA UNDER AND AROUND MOWER FOR ANY OBJECTS THAT COULD BE THROWN FROM UNDER MOWER. MAKE SURE THAT MOWER DISCHARGE AREA IS CLEAR.

STARTING THE MOWER

- Adjust mower cutting height.
- Start mower engine.
- Move throttle to fast position.
- Move mower blade lever to "ENGAGED" position.

OPERATION

MOWER HEIGHT ADJUSTMENT

CAUTION: SHUT OFF MOWER ENGINE AND REMOVE SPARK PLUG WIRE FROM SPARK PLUG BEFORE MAKING ANY ADJUSTMENTS TO THE MOWER.

The cutting height range is approximately 1-1/2 to 4-1/2 inches. The heights are measured from the ground to the blade tip with the engine shut off. The average lawn should be cut to approximately 2-1/2 inches during the cool season and to over 3 inches during hot months. The particular height may vary depending on soil conditions, type of grass and height of grass being mowed. For healthier and better looking lawns, mow often and after moderate growth. For best cutting performance, grass over 6 inches in height should be mowed twice. Make the first cut relatively high, the second to the desired height.

TO ADJUST MOWER CUTTING HEIGHT

- Remove hair cotter pin from locating pin. (See Fig. 6)
- Apply lift pressure to height adjustment lift lever.
- Remove the locating pin from the height adjustment strap.
- Move height adjustment Lift Lever up or down to align it with the desired hole in the height adjustment strap.
- Reassemble locating pin into the height adjustment strap and secure with hair cotter pin.
- Make sure that both side height adjustment straps are adjusted to the same height.

FRONT TO BACK RAKE ADJUSTMENT

To obtain the best cutting results and to reduce engine load, the mower housing should be adjusted so that the front is approximately 1/2" to 1" lower than the rear. To check front to back adjustment, measure from the bottom edge of the deck to the ground at both front and rear of the deck.

TO ADJUST MOWER FROM FRONT TO BACK

- Remove two hair cotter pins from two clevis pins in the tow bar adjustment. (See Fig. 6)
- Remove two clevis pins from tow bar adjustment.
- Raise or lower the tow bar to obtain the proper front to back adjustment.
- Reassemble two clevis pins to tow bar adjustment and secure with two hair cotter pins.

FRONT GAUGE WHEEL ADJUSTMENT

The height of the front gauge wheels is adjustable to help prevent the front corners of the mower from gouging into the soil when mowing on uneven terrain. The factory setting of the wheels (highest of three positions) is adequate for most lawn conditions. If the wheels are lowered, they must clear the ground when the mower is set at the desired cutting height with front to back rake.

TO ADJUST FRONT GAUGE WHEELS

- Remove lock nut and washer from bolt.
- Move gauge wheel with bolt to desired height setting.
- Reassemble lock nut and washer onto bolt.
- Adjust jam nut if wheel is too tight or has end play.

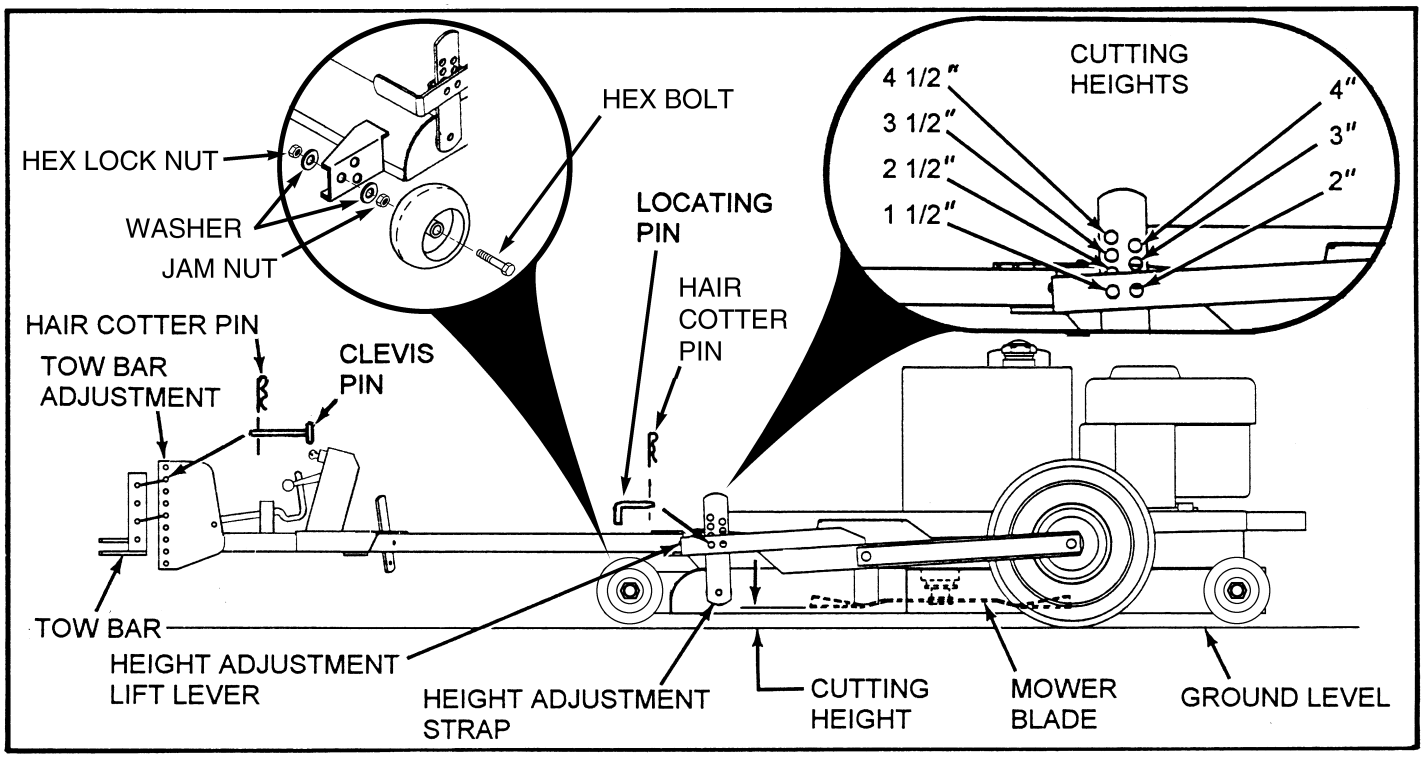


FIG. 6

OPERATION

TOW HITCH OFFSET ADJUSTMENT

This tow behind mower has been designed to run offset from the center of the tow vehicle to give additional cutting width

- The adjustable tow hitch of this mower can be set in four positions, straight, approximately 20" offset, 36" offset and 49" offset to either side. (See Fig. 7)
- We recommend when cutting with a tow vehicle already equipped with a 46" or 50" mower that the 49" offset position be used. When cutting with a tow vehicle already equipped with 36", 38" 40"or 42" mower the 36" offset position be used. When cutting heavier grass or when conditions warrant the mower can be adjusted to the 20" offset position.
- If tow vehicle is not equipped with a mid-mount mower the hitch can be adjusted to a straight position, but we recommend using the offset position to eliminate grass being crushed down by the tow vehicle.

CAUTION: SHUT OFF MOWER ENGINE AND REMOVE SPARK PLUG WIRE FROM SPARK PLUG BEFORE MAKING ANY ADJUSTMENTS TO THE MOWER.

TO ADJUST THE OFFSET HITCH

- Pull back the pivot latch from the notch of the front quadrant. Adjust the hitch tube to the desired offset and release the pivot latch into the notch of the quadrant. (See Fig. 8)
- Pull back the pivot latch from the notch of the rear quadrant. Adjust the hitch tube to the corresponding notch of the front quadrant and release the pivot latch into the notch.

IMPORTANT: The hitch tube must be assembled to the same offset notch in both the front and rear quadrants.

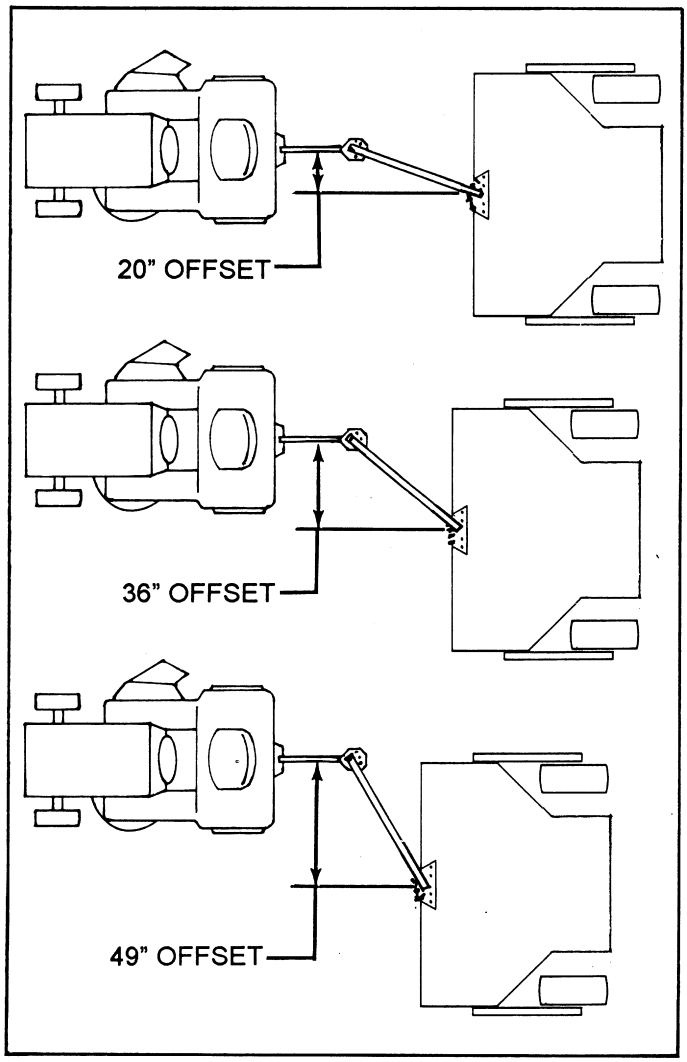


FIG. 7

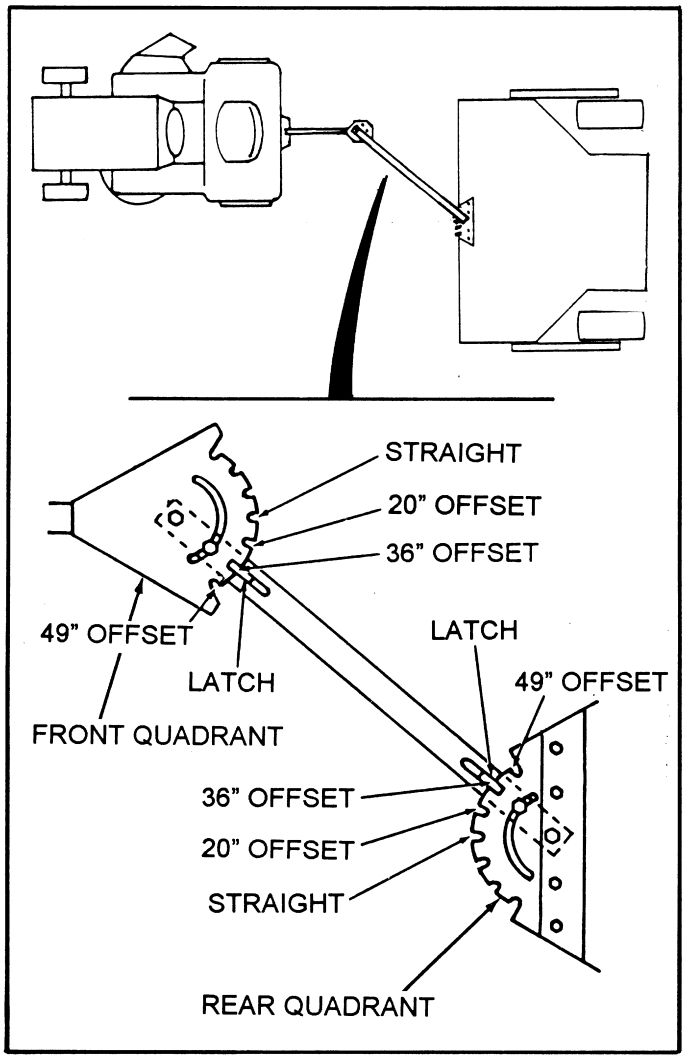


FIG. 8

OPERATION

HOW TO START MOWER

- Start mower engine.
- Move throttle to full position.
- Sit on tractor seat.
- Engage mower blades.
- Note when engaging mower blades. Always move mower to a flat surface were the grass has already been cut.
- Operate the tractor at medium ground speed 3-4 MPH.

MOWING PROCEDURES

CAUTION:
TRAGIC ACCIDENTS CAN OCCUR IF THE OPERATOR IS NOT ALERT TO THE PRESENCE OF CHILDREN. CHILDREN ARE OFTEN ATTRACTED TO THE MACHINE AND THE MOWING ACTIVITY. *NEVER* ASSUME THAT CHILDREN WILL REMAIN WHERE YOU LAST SAW THEM.

CAUTION: NEVER CARRY CHILDREN. THEY MAY FALL OFF AND BE SERIOUSLY INJURED OR INTERFERE WITH SAFE OPERATION.

Mowing should be started with tractor in low gear and speed increased only as mowing conditions will safely permit.

Mower will perform at its best when engine throttle is set for full throttle.

Better mowing results will be obtained in grassy areas if they are mowed when the grass is approximately 4" to 5" maximum height. While your mower will cut grass taller than 5", you will experience a substantial increasing in horsepower required and some change in the finished appearance of the area mowed.

Mowing conditions will vary from place to place, including the types of grass which are being mowed, such as fine stalk, coarse stalk, dense or sparse grasses. When mowing tall grass you may find that the pressure of wheel tracks may cause certain grasses to be pushed downward and will not be mowed properly. If this condition exists you may have to mow the area twice, the first mowing with the mower raised and the second mowing at the normal height that you have chosen. If it is practical, better results will be found if the second mowing is at right angle in travel to the previous mowing.

Do not mow grass when it is wet. Wet grass will plug mower and leave undesirable clumps. allow grass to dry before mowing.

Always operate mower engine at full throttle when mowing to assure better mowing performance and proper discharge of material. Regulate ground speed by selecting a low enough gear to give the mower cutting performance as well as the quality of cut desired.

When operating any attachment select a ground speed that wills suit the terrain and give best performance of the attachment being used.

CUSTOMER RESPONSIBILITIES

GENERAL RECOMMENDATIONS

The warranty on this Vehicle does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, operator must maintain unit as instructed in this manual.

- Once a year you should replace the spark plug, clean or replace air filter, replace fuel filter and check blades and belts for wear. A new spark plug and clean air filter assure proper air-fuel mixture and help your engine run better and last longer.

BEFORE EACH USE

- Check engine oil level.
- Check blade operation
- Check for loose fasteners.

LUBRICATION

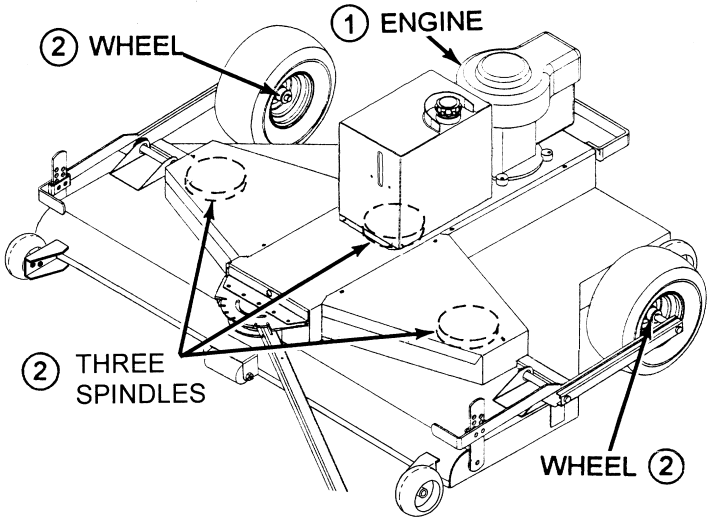
Keep unit well lubricated (See "LUBRICATION CHART").

MAINTENANCE SCHEDULE FILL IN DATES AS YOU COMPLETE REGULAR SERVICE	BEFORE EACH USE	FIRST 2 HOURS	EVERY 5 HOURS	EVERY 25 HOURS OR EACH YEAR	SERVICE DATES
Check Engine Oil Level	✓		✓		
Change Engine Oil		✓		✓1,2	
Inspect Spark Arrester Muffler				✓	
Inspect Air Screen	✓				
Check and Clean Air Cleaner			✓		
Replace Air Cleaner Cartridge				✓2	
Clean Engine Cylinder Fins				✓	
Replace Spark Plug				✓	
Lubricate Spindles				✓	

1 - Change more often when operating under a heavy load or in high ambient temperatures.

2 - Service more often when operating in dirty or dusty conditions.

LUBRICATION CHART



① REFER TO ENGINE MANUAL

② GENERAL PURPOSE GREASE

IMPORTANT: DO NOT OIL OR GREASE PIVOT POINTS. VISCOUS LUBRICANTS WILL ATTRACT DUST AND DIRT THAT CAN CAUSE WEAR ON PIVOT POINTS. IF YOU FEEL THEY MUST BE LUBRICATED, USE ONLY A DRY POWERED GRAPHITE TYPE LUBRICANTS.

CUSTOMER RESPONSIBILITIES

BLADE CARE AND SERVICE

BLADE CARE

For best results mower blades must be kept sharp. The blades casn be sharpened with a few strokes of a file or on a grinding wheel. Do not attempt to sharpen while on mower.

- To remove blade for sharpening, use wooden block to hold blade while removing the blade mounting nut. The nuts have right hand threads. (See Fig. 9)

CAUTION:
DO NOT HANDLE MOWER BLADES WITH BARE HANDS. CARELESS OR IMPROPER HANDLING MAY RESULT IN SERIOUS INJURY.

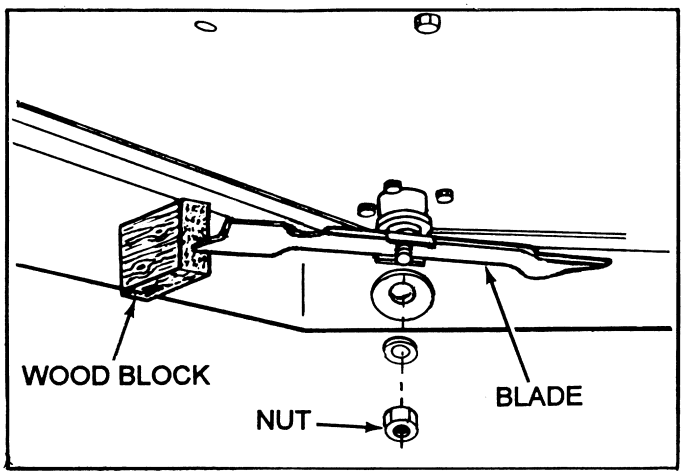


FIG. 9

When grinding, care should be taken to maintain blade balance and the blade should be checked for proper balance before reinstalling to mower.

- Check and balance blade. Use a balancing machine or fixture as shown in illustration. File material off heavier end of blade until it is balanced. (See Fig. 10)

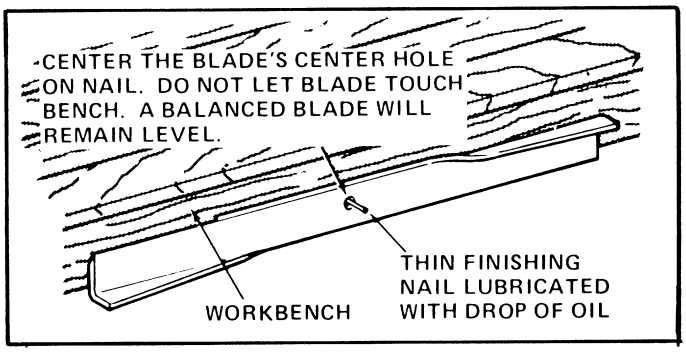

CENTER THE BLADE'S CENTER HOLE ON NAIL. DO NOT LET BLADE TOUCH BENCH. A BALANCED BLADE WILL REMAIN LEVEL.
WORKBENCH
THIN FINISHING NAIL LUBRICATED WITH DROP OF OIL

FIG. 10

To insure satisfactory operation, it is recommended that before the start of each mowing season the old blades be discarded and replaced with new blades.

NOTE: Check nuts and blades occasionally to make sure nuts are tight.

WARNING
SHUT OFF MOWER ENGINE AND REMOVE SPARK PLUG WIRE FROM SPARK PLUG BEFORE MAKING ANY ADJUSTMENTS OR REPAIRS TO THE MOWER

CLEANING THE MOWER

Water pressure from a garden hose will remove fresh clippings from the underside of the mower. Clean mower after each mowing.

DAILY MAINTENANCE

Make sure all nuts and bolts are tight, cotter pins and retainer springs are secure. Keep blades sharp. Observe all Safety Precautions. Keep mower well lubricated.

REPAIR PARTS

Your rotary mower has been produced with components designed for your unit. Although standard V-belts, bearings, blades, pulleys, etc. may look like parts used on your rotary mower, and while similar in appearance, many are of a different construction and could in some cases cause a malfunction in the operation of the machine.

For continued satisfactory performance use only repair parts supplied by the manufacturer. See the dealer where mower was purchased for factory replacement parts.

CUSTOMER RESPONSIBILITIES

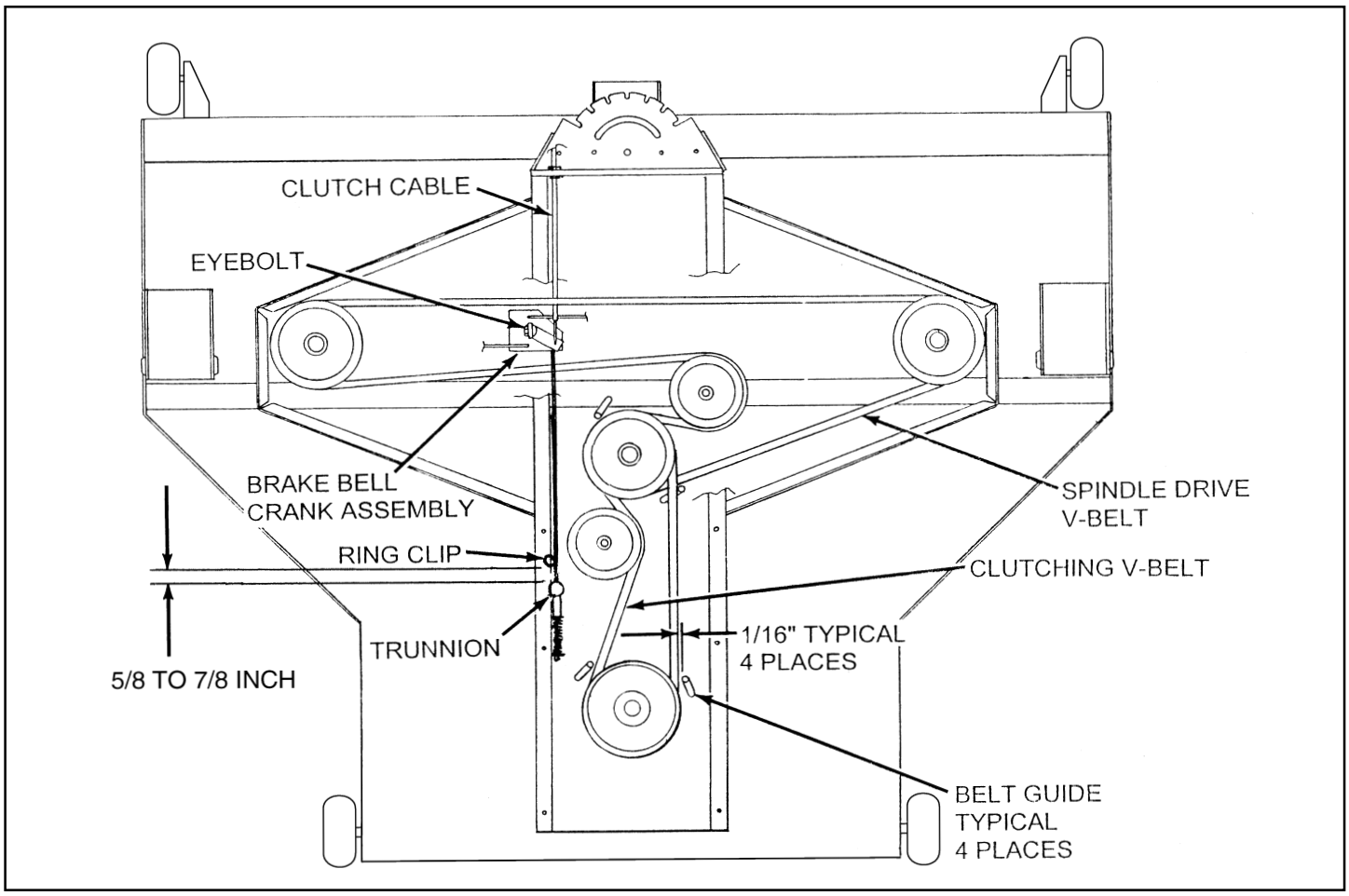


FIG. 11

CLUTCHING V-BELT REMOVAL

- Disconnect spark plug wire.
- Remove two Belt Covers from the mower deck.
- Remove two side panels from Engine Mounting Plate.
- Loosen and move four Belt Guides from out of the way of the V-belt removal. (See Fig. 11)
- Remove Clutching V-Belt from around Engine Pulley, from around Double Pulley and from around Idler Pulley.

REINSTALLING CLUTCHING DRIVE V-BELT

- Install Clutching V-Belt around Engine Pulley, around Double Pulley and around Idler Pulley.
- Move Clutch Lever to 'ENGAGED" position.
- Move Belt Guides to within 1/16" from V-belt and secure in place with bolt.
- Follow CLUTCHING V-BELT REMOVAL in reverse to complete reinstalling V-belt.

SPINDLE DRIVE V-BELT REMOVAL

- Disconnect spark plug wire.
- Remove two belt covers from the mower deck.
- Remove two side panels from Engine Mounting Plate.
- Remove clutching V-belt. (See CLUTCHING V-BELT REMOVAL)
- Remove Eyebolt holding Brake Bell Crank Assembly to deck and move Brake Bell Crank Assembly out from under Engine Mounting Plate. (See Fig. 11)
- Disconnect Clutch Cable from Bell Crank Assembly.
- Remove Spindle Drive V-Belt from around three pulleys and idler pulley.

REINSTALLING SPINDLE DRIVE V-BELT

- Reinstall Spindle Drive V-Belt following the above procedure in reverse.

CUSTOMER RESPONSIBILITIES

CHECKING CLUTCHING V-BELT TENSION

- Disconnect spark plug wire.
- Remove left side panel from Engine Mounting Plate.
- Place the Mower Blade Clutch Lever in the "ENGAGED" position.
- Check spring tension. (Refer to Fig. 11, page 20.)
- Tension is correct if there is a 5/8 to 7/8 inch gap between the spring clip and the trunnion of the spring rod.
- If gap is not 5/8 to 7/8 inch, and adjustment will be required.

ADJUSTING CLUTCHING V-BELT TENSION

TO INCREASE CLUTCHING V-BELT TENSION:

- Place Mower Blade Clutch Lever in the "DISENGAGED" position.
- Loosen the Outer Nut of the Clutch Cable. (See Fig. 12)
- Tighten the Inner Nut to increase spring tension. (See Fig. 12)

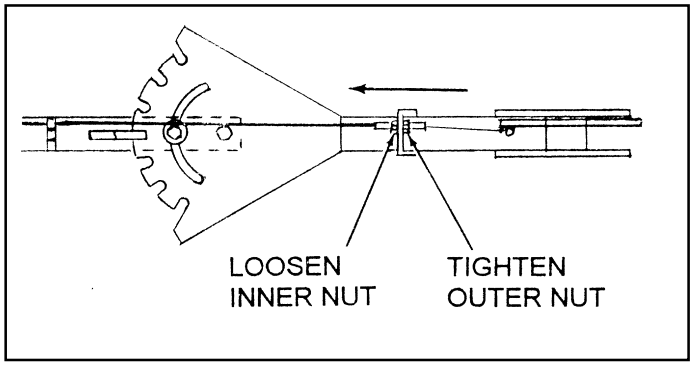


FIG. 12

NOTE: For every 1/8 inch of adjustment made to the Cable you will increase the gap between the Ring Clip and the Trunnion by 1/8 inch.

STORAGE

Immediately prepare your mower for storage at the end of the season or if the unit will not be used for 30 days or more.

MOWER

When the mower is to be stored for a period of time, clean it thoroughly, remove all dirt, grease, leaves, etc. Store in a clean dry area.

- Clean entire mower (See "CLEANING")
- Lubricate as shown in the Customer Responsibilities section of this manual.
- Be sure that all nuts, bolts, screws, and pins are securely fastened. Inspect moving parts for damage, breakage an wear. Replace if necessary.
- Touch up all rusted or chipped paint surfaces; sand lightly before painting.

CLEANING

IMPORTANT: FOR BEST PERFORMANCE, KEEP MOWER HOUSING FREE OF BUILT-UP GRASS AND TRASH. CLEAN THE UNDERSIDE OF YOUR MOWER AFTER EACH USE.

CAUTION: Disconnect spark plug wire from spark plug and place wire where it cannot come in contact with the spark plug.

- Clean the underside of your mower by scraping to remove build-up of grass and trash.
- Keep finished surfaces and wheels free of all gasoline, oil, etc.
- We do not recommend using a garden hose to clean mower unless the electrical system, muffler, air filter, and carburetor are covered to keep water out. Water in engine can result in shortening engine life.

ENGINE

- Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.
- Use fresh fuel next season.

NOTE: Fuel stabilizer is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to gasoline in fuel tank or storage container. Always follow the mix ratio found on stabilizer container. Run engine at least 10 minutes after adding stabilizer to allow the stabilizer to reach the carburetor. Do not drain the gas tank and carburetor if using fuel stabilizer.

ENGINE OIL

Drain oil (with engine warm) and replace with clean engine oil. (See engine manual)

CYLINDER

- Remove spark plug.
- Pour one ounce (29 ml) of oil through spark plug hole into cylinder.
- Pull starter handle slowly a few times to distribute oil.
- Replace with new spark plug.

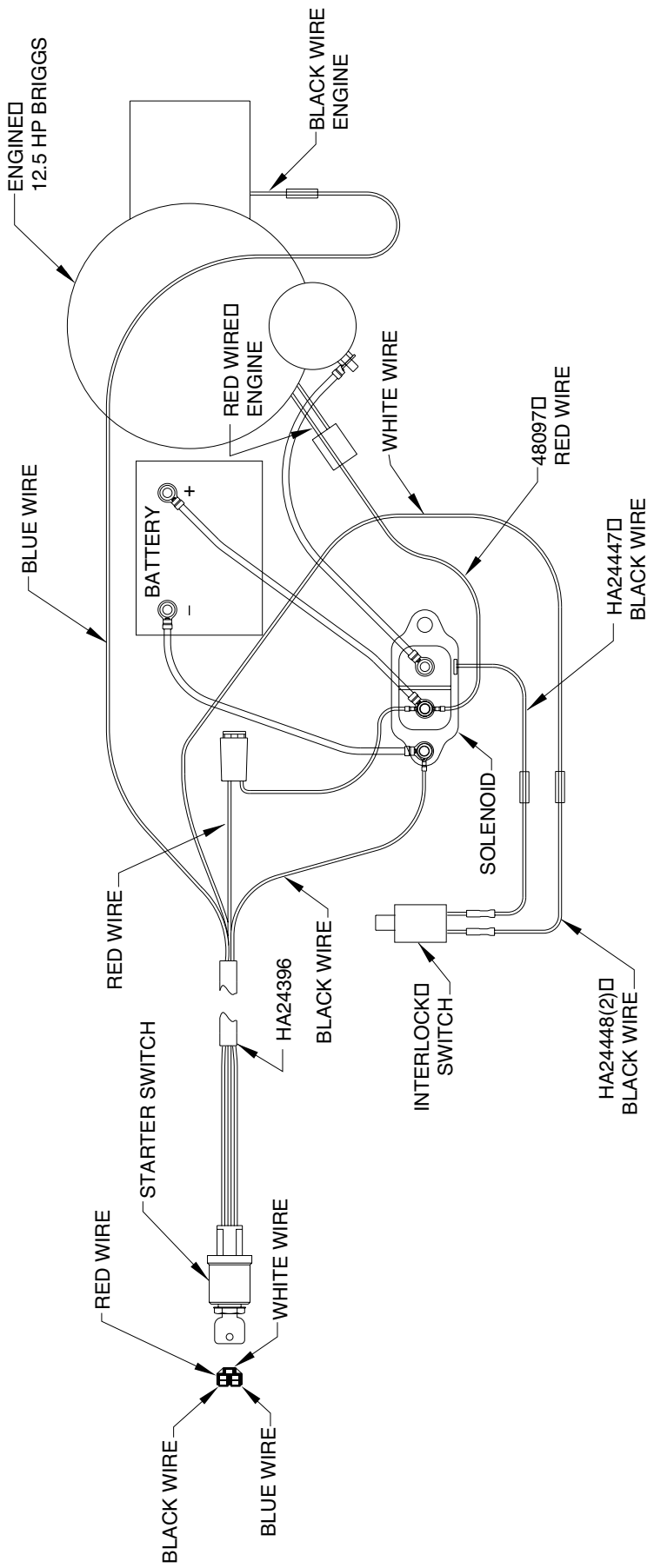
OTHER

- Do not store gasoline from one season to another.
- Replace your gasoline can if your can starts to rust. Rust and/or dirt in your gasoline will cause problems.
- If possible, sore your unit indoors and cover it to give protection from dust and dirt.
- Cover your unit with a suitable protective cover that does not retain moisture. Do not use plastic. Plastic cannot breathe which allows condensation to form and will cause your unit to rust.

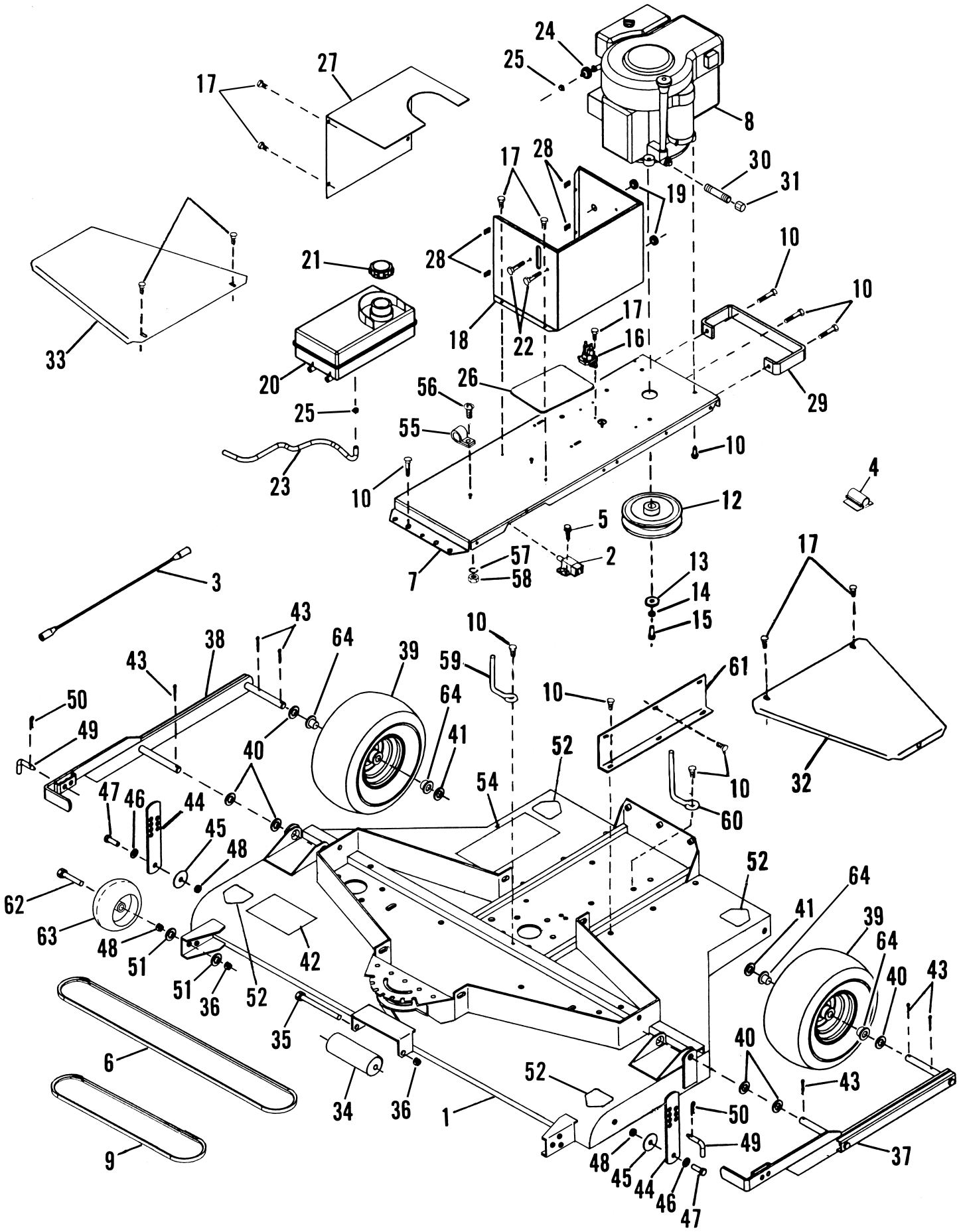
IMPORTANT: NEVER COVER MOWER WHILE ENGINE AND EXHAUST ARE STILL WARM.

CAUTION: Never store the mower with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

WIRING DIAGRAM



63" FINISH CUT TRAILMOWER - MODEL 45-0305



63" FINISH CUT TRAILMOWER - MODEL 45-0305

1.	HA24390	Mower Deck Assembly AW
2.	HA23199	Interlock Switch
3.	HA24448	Interlock Wire
4.	HA11947	Cord Clip
5.	HA9411666*	Self Tapping Screw #10-16 x 1/2
6.	HA18985	V-Belt, Pulley Drive
7.	HA24394	Engine Mounting Plate
8.	28T7071154E1	Engine, 12.5 H.P. Briggs & Stratton
9.	HA4352	V-Belt, Engine Drive
10.	HA23193	Thread Forming Screw 3/8-16 x 1-1/4
12.	48094	Engine Drive Pulley
13.	HA23875	Flat Washer
14.	43555	Med. Lock Washer 7/16
15.	HA181668*	Hex Head Bolt 7/16-20 x 1-1/4
16.	HA23754	Solenoid
17.	HA15683	Self Tapping Screw 1/4 x 1/2
18.	24785	Gas Tank Mounting Housing
19.	HA16124	Rubber Grommet
20.	HA23732	Gasoline Tank
21.	HA23733	Gasoline Tank Cap
22.	HA163318*	Self Tapping Screw 1/4 x 7/8
23.	HA23790	Fuel Line
24.	HA23791	Fuel Filter
25.	HA23792	Fuel Line Clamp
26.	HA24370	Battery Pad
27.	24784	Battery Cover
28.	HA12596	Spring Clip Nut
29.	HA24397	Rear Bumper
30.	48095	Pipe, 3/8" x 2-1/2"
31.	48096	Cap, 3/8"
32.	HA24426	Left Hand Deck Drive Cover
33.	HA24427	Right Hand Deck Drive Cover
34.	HA12138	Mower Roller
35.	HA126145	Hex Head Bolt 1/2-13 x 7
36.	43262	Hex Lock Nut 1/2-13
37.	HA23802	Left Hand Wheel Mtg. Assembly
38.	HA23803	Right Hand Wheel Mtg. Assembly
39.	HA24350	Wheel
40.	HA456151*	Flat Washer 13/16 x 1-1/2 x .134
41.	HA23263	Flat Washer
42.	HA24431	Operation Decal
43.	HA103407*	Cotter Pin 3/16 x 1"
44.	HA23811	Height Adjustment Strap
45.	HA6979	Flat Washer
46.	HA120396*	Flat Washer 17/32 x 1-1/16 x .095
47.	43020*	Hex Head Bolt 1/2-13 x 1-1/2
48.	43019*	Hex Jam Nut 1/2-13
49.	HA23220	Locating Pin
50.	HA3430	Hair Cotter Pin
51.	43352	Washer
52.	HA12315	Danger Decal
54.	HA23812	Operation/Adjustment Decal
55.	HA23760	Hose/Cable Clip 1/2"
56.	HA159920*	Pan Head Screw #10-24 x 1/2
57.	HA120217*	Med. Lock Washer #10
58.	HA120361*	Hex Nut #10-24
59.	HA22981	V-Belt Guide
60.	HA24413	Belt Guide
61.	HA24425	Side Plate
62.	47024	Hex Head Bolt 1/2-13 x 4-1/2
63.	48098	Wheel Anti Scalp
64.	44488	Wheel Bearing
NP	48099P	Owner's Manual

*Standard Hardware – Purchase Locally

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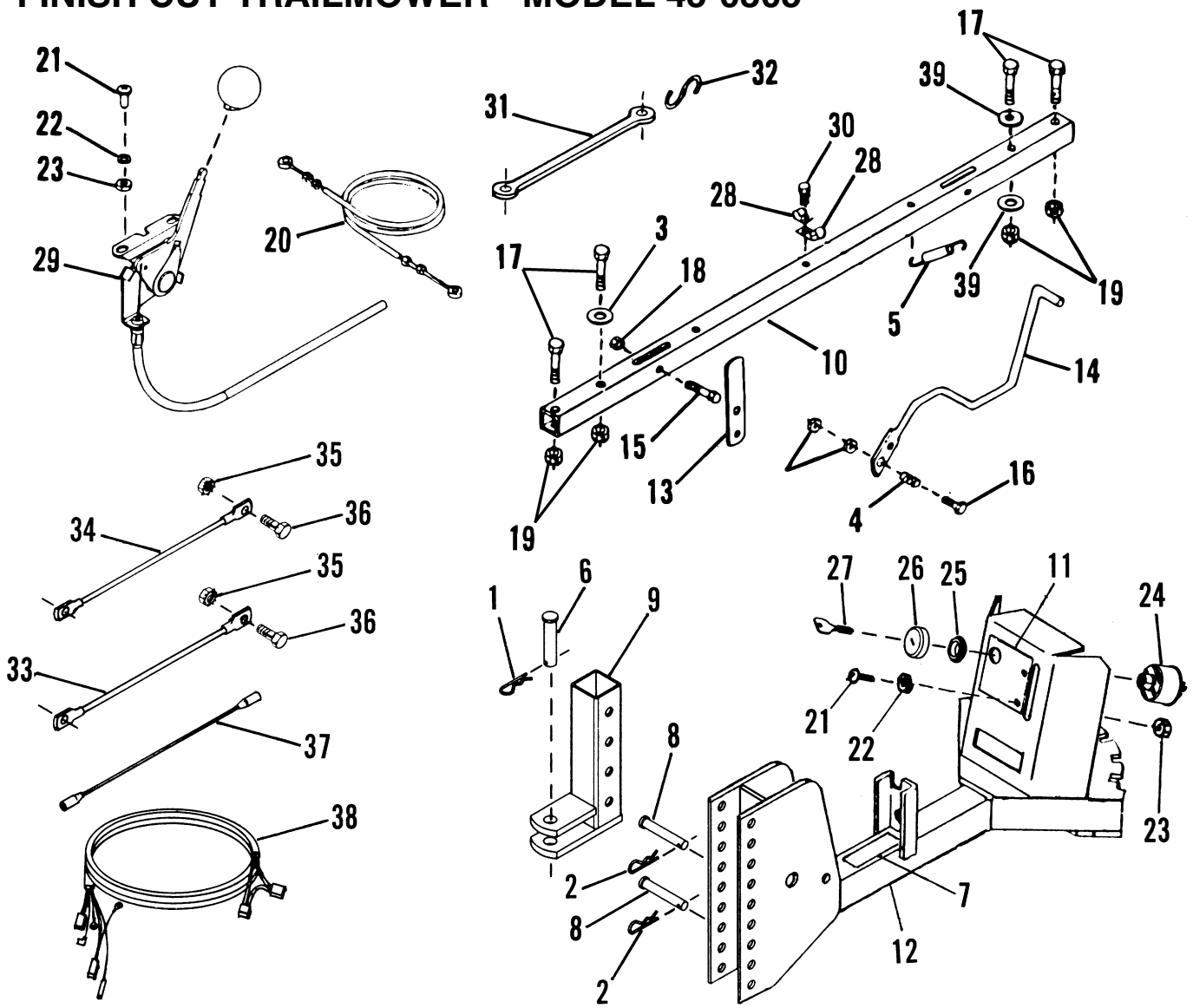
63" FINISH CUT TRAILMOWER - MODEL 45-0305



1.	HA3341	Hair Cotter Pin (large)
2.	HA3430	Hair Cotter Pin (medium)
3.	HA15200	Flat Washer 13/32 x 1-3/16 x 3/16
4.	HA19445	Compression Spring
5.	HA20186	Extension Spring
6.	HA20988	Clevis Pin
7.	HA23265	Clutch Lever Decal
8.	HA23636	Clevis Pin
9.	64191	Drawbar Assembly
10.	HA23819	Drawbar Tube
11.	HA23820	Throttle/Choke Control Decal
12.	HA24437	Hitch Assembly
13.	HA24441	Latch Strap
14.	HA24442	Clutch Lever
15.	44180*	Hex Head Bolt 5/16-18 x 2
16.	43062*	Hex Head Bolt 3/8-16 x 1-1/2
17.	HA180137*	Hex Head Bolt 3/8-16 X 2-3/4
18.	43064*	Hex Lock Nut 5/16-18
19.	43082*	Hex Lock Nut 3/8-16
20.	HA24619	Clutch Cable
21.	HA159920*	Pan Head Screw #10-24 x 1/2
22.	HA120217*	Med. Lock Washer #10
23.	HA120361*	Hex Nut #10-24
24.	HA23749	Starter Switch
25.	HA23750	Switch Mounting Nut
26.	HA23751	Switch Cover
27.	HA23752	Switch Key
28.	HA23760	Hose/Cable Clip 1/2
29.	HA24618	Throttle Cable
30.	HA9411666*	Self Tapping Screw #10-16 x 1/2
31.	HA23795	Battery Hold Down Strap
32.	HA23796	"S" Hook
33.	HA23787	Black Battery Cable (Neg.)
34.	HA23788	Red Battery Cable (Pos.)
35.	HA271178*	Hex Nut & Lockwasher Assy 1/4-20
36.	43012	Hex Head Bolt 1/4-20 x 3/4
37.	48097	Engine/Charging Wire
38.	HA24396	Wire Harness
39.	HA120388*	Flat Washer 3/8

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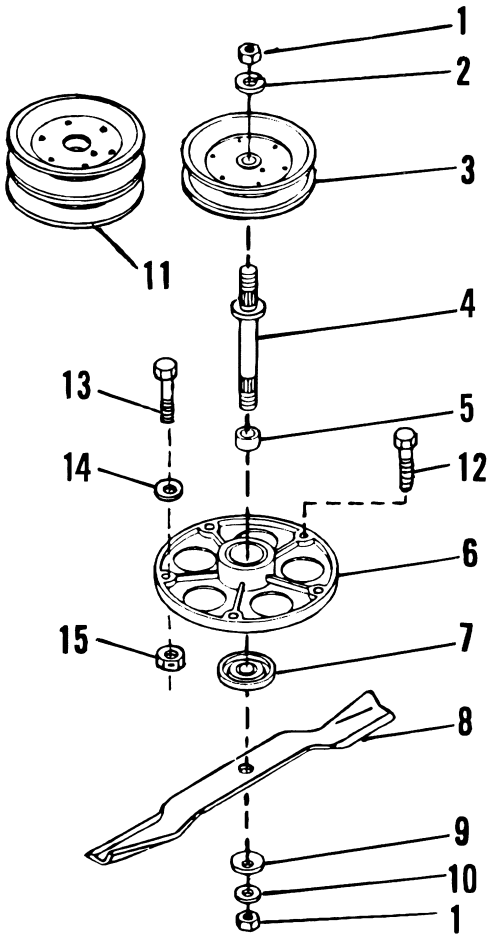
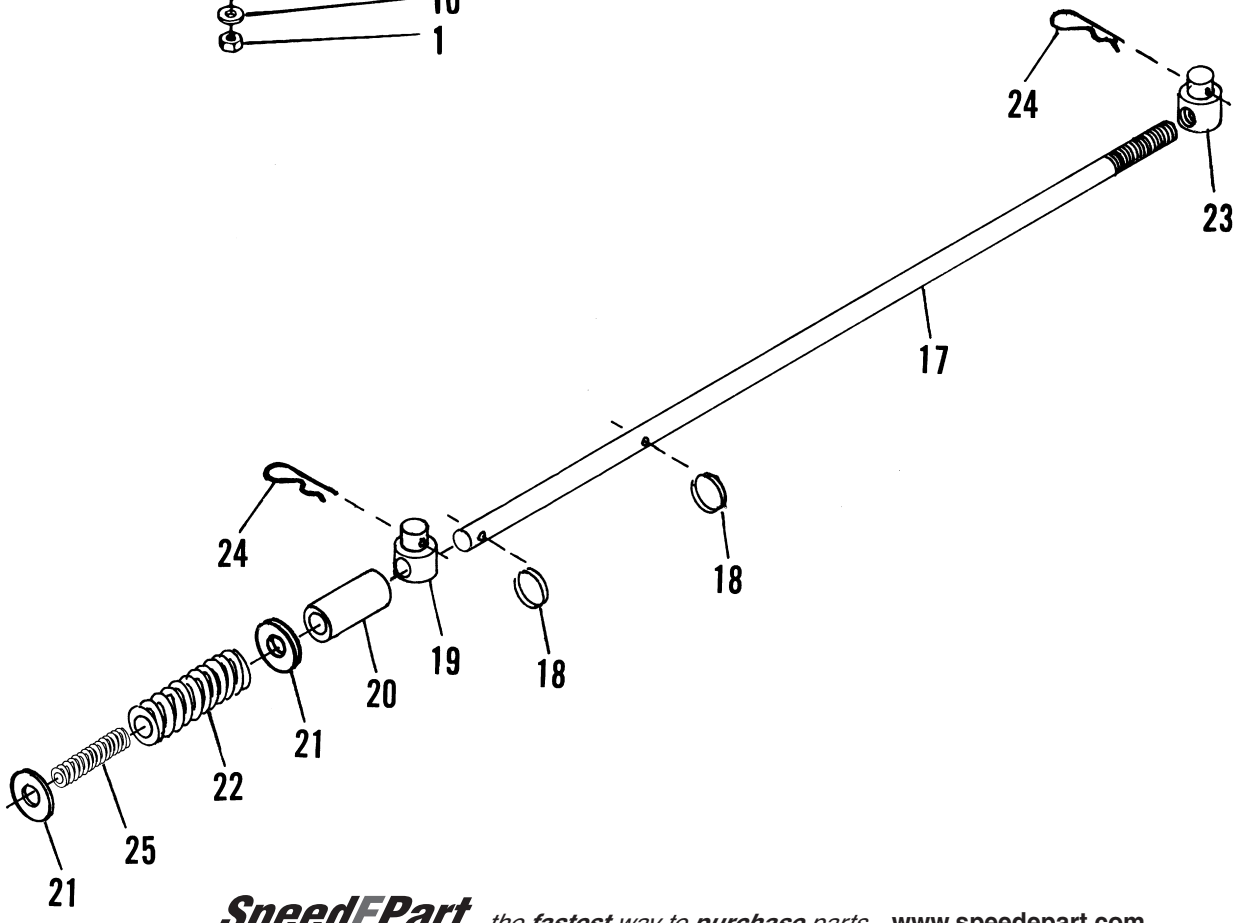


1.	HA124634*	Hex Nut 9/16-18
2.	HA120898*	Lock Washer 9/16
3.	HA23343	Blade Spindle Pulley
4.	HA23243	Jackshaft
5.	HA23244	Spacer
6.	HA23242	Housing and Bearing Assembly
7.	HA23245	Blade Adapter
8.	HA23516	Mower Blade
9.	HA23246	Belleville Washer
10.	HA20129	Thrust Washer
11.	HA24406	Blade Spindle Double Pulley
12.	HA23193	Self Tapping Screw 3/8-16 x 1-1/4
13.	43054*	Hex Head Bolt 3/8-16 x 2
14.	HA120388*	Flat Washer 3/8
15.	43082*	Hex Lock Nut 3/8-16
17.	HA24412	Idler Tension Rod
18.	HA5714	Spring Clip
19.	HA11424	Clutch Rod Anchor
20.	HA3027	Spacer
21.	HA446363*	Flat Washer 3/8 x 7/8 x .083
22.	HA11425	Compression Spring
23.	HA9492	Clutch Rod Anchor
24.	HA3430	Hair Cotter Pin
25.	43035	Spring

*Standard Hardware - Purchase Locally



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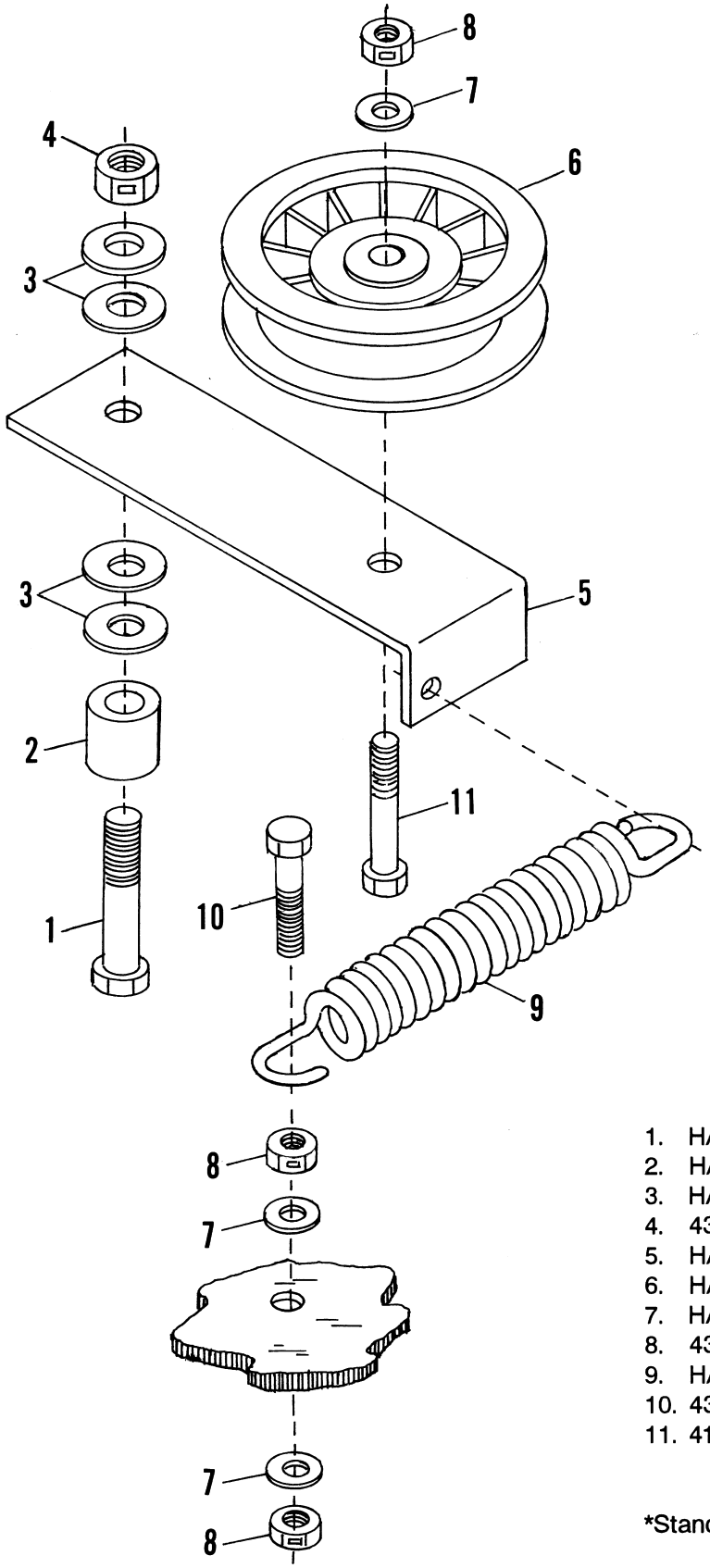
63" FINISH CUT TRAILMOWER - MODEL 45-0305



1.	HA180183	Hex Head Bolt 1/2-13 x 2-1/4
2.	HA23783	Spacer
3.	HA120389*	Flat Washer 1/2 x 1-1/4
4.	43262*	Hex Lock Nut 1/2-13
5.	HA24414	Idler Arm Bracket
6.	HA15015	Idler Pulley
7.	HA446363*	Flat Washer 3/8 x 7/8 x .083
8.	43082*	Hex Lock Nut 3/8-16
9.	HA4798	Idler Arm Spring
10.	43087*	Hex Head Bolt 3/8-16 x 1-1/4
11.	41576*	Hex Head Bolt 3/8-16 x 1-3/4

*Standard Hardware - Purchase Locally

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1.	HA15015	Idler Pulley
2.	HA23668	Belt Guide Strap
3.	HA24408	Idler Arm Plate
4.	HA24409	Idler Mounting Bracket
5.	HA24410	Interlock Bracket
6.	HA120389*	Flat Washer 1/2 x 1-1/4
7.	43054*	Hex Head Bolt 3/8-16 x 2
8.	HA180183*	Hex Head Bolt 1/2-13 x 2-1/4
9.	HA446363*	Flat Washer 3/8 x 7/8 x .083
10.	43082*	Hex Lock Nut 3/8-16
11.	43262*	Hex Lock Nut 1/2-13
12.	HA23193	Self Tapping Screw 3/8-16 x 1-1/4
13.	43000	Tension Spring
14.	1509-90	Hex Head Bolt 1/4-20 x 1-1/4
15.	43013	Hex Lock Nut 1/4-20

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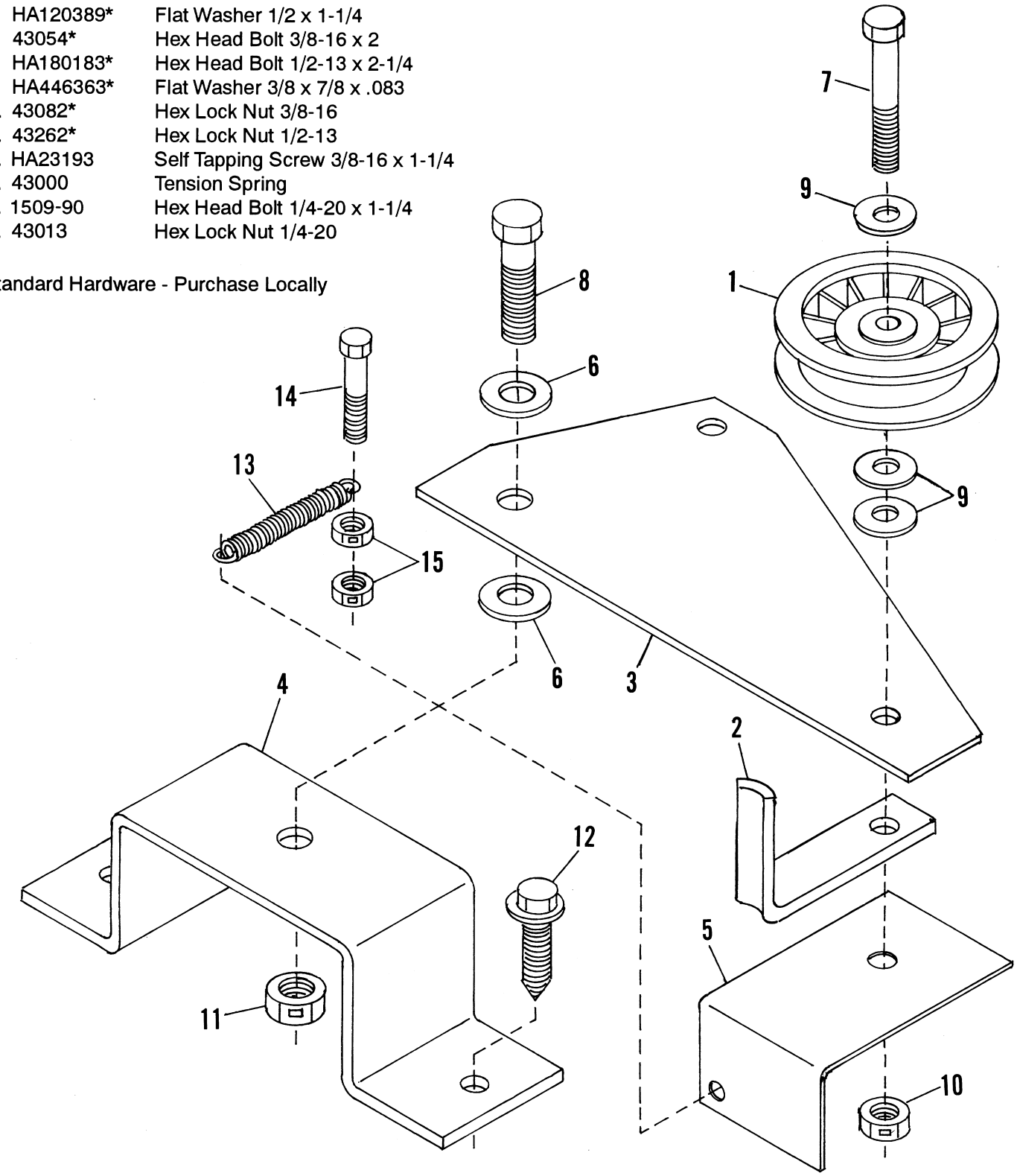

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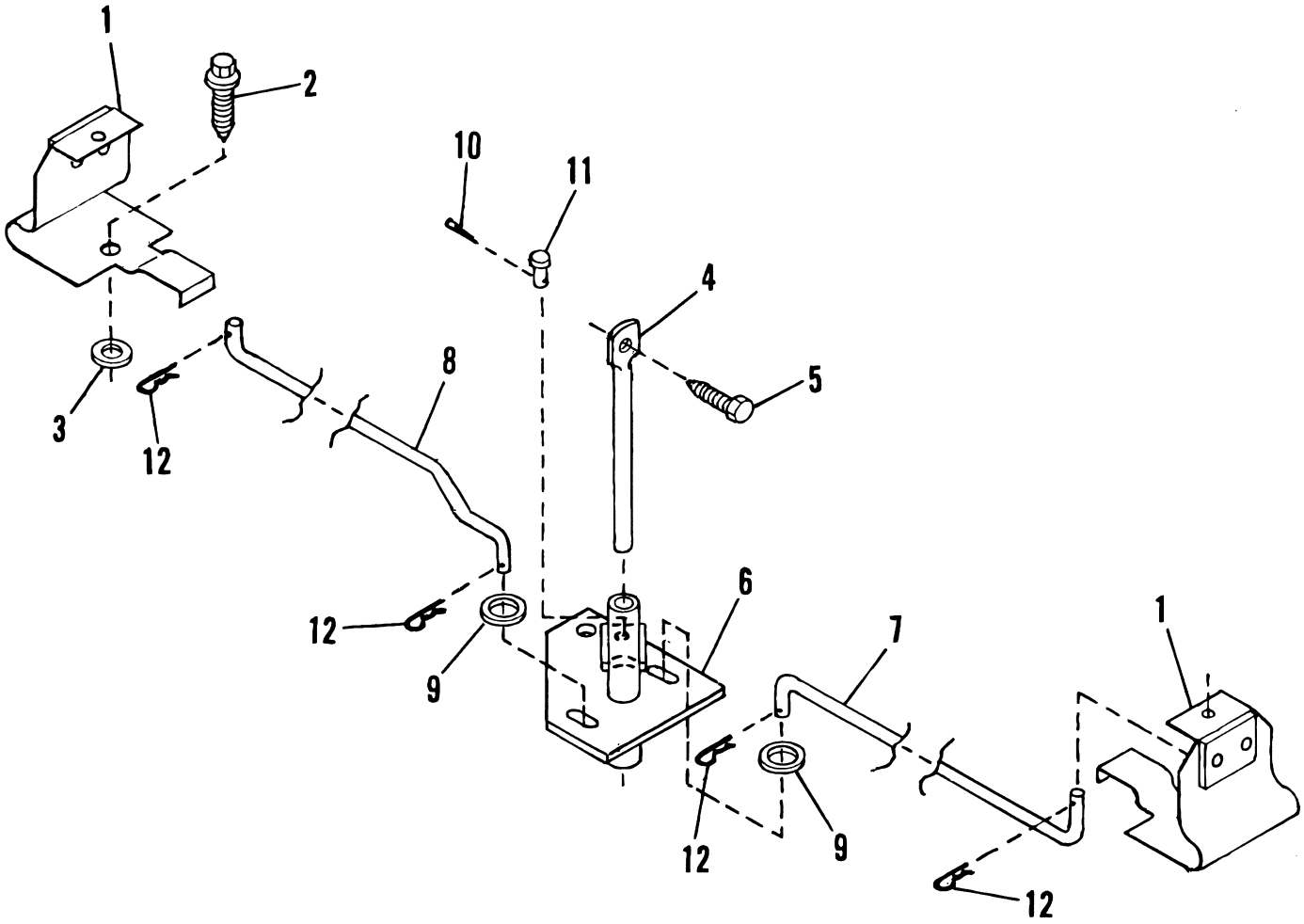

1.	HA24419	Brake Assembly
2.	HA23193	Self Tapping Screw 3/8-16 x 1-1/4
3.	HA120388*	Flat Washer 3/8
4.	HA24451	Bell Crank Rod
5.	HA5770	Self Tapping Screw 5/16-18 x 1"
6.	HA24444	Bellcrank Assembly
7.	HA24422	Short Brake Rod
8.	HA24423	Long Brake Rod
9.	HA446188*	Flat Washer 17/64 x 5/8 x .049
10.	HA103373*	Cotter Pin
11.	HA24424	Clevis Pin
12.	HA3090	Hair Cotter Pin

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